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The Boston Surgical Society.

INTRODUCTION OF DR. W. W. KEEN.

BY ROBERT W. LOVETT, M.D.,

President of the Boston Surgical Society.

At the Special Meeting of the Society, in Boston, on October 25, 1922, for the Presentation of the Henry J. Bigelow Medal to Dr. Keen.

The accomplished surgeon, wherever he lives and whatever his surroundings, must needs be a man of more than average ability. He must possess a sound knowledge of the science of medicine and, in addition to this, he must be familiar with and adept in the handicraft of surgery. If he is to attain national or even international repute it is obvious that he must be endowed with characteristics and powers of a grade far above the ordinary allotment.

These characteristics are of two kinds, professional and personal. His professional attainments may be in general or special surgery, and in these he may reach eminence in one or more of several directions. He may be a successful and highly accomplished operator with a sound knowledge of the principles of general surgery which lie at the root of all practical surgical performance; or he may be a man, who by research can add to our surgical knowledge and thus to our efficiency in saving life and preserving function. He may be a distinguished teacher who possesses the faculty of stimulating the student and imparting to him a real knowledge of the principles and practice of surgery by teaching him to think instead of teaching him to remember. He may be a sound and clear writer who can assemble existing facts and add new ones from his experience in such a way as to raise the level of surgical knowledge and thus add to the efficiency of the profession. He may possess such rare qualities that he excels in more than one of these departments. So much for his professional qualifications.

With professional qualifications alone a man may go far in any of the lines mentioned, but if to these he adds personal qualifications of a certain sort he becomes a man of eminence and distinction. The required personal qualifications are possessed by nearly all really successful surgeons to a greater or less degree. They are cleanliness of mind and body, straightforwardness and honesty, squareness and unselfishness. If in addition to these he possesses fearlessness, vision and idealism, he becomes a man to whom we all turn and whose example and advice we follow.

Such a man has been invited by the Boston Surgical Society to address us this evening.

Address.

SIXTY YEARS OF SURGERY.*
1862—1922.

By W. W. Keen, M.D.,

Emeritus Professor of Surgery, Jefferson Medical College, Philadelphia, Pa

Henry J. Bigelow I admired at a distance as a superior being, as was becoming in a student and young teacher. The older I grew and the more I knew, the more I admired him. Little did I dream, when I first opened Gray's "Anatomy" and Gross' "Surgery"—both quite new books in 1860—that I should ever have my name linked with those of Gray and Gross, and now, by your unexpected kindness, also with that of Bigelow. I thank you most sincerely for this great and unexpected honor.

While turning over in my mind several possible topics for this address, one of my eminent but younger surgical friends remarked that he knew only vaguely the condition of surgery at the time of the Civil War. This at once gave me my topic.

I began my medical studies in September, 1860, and graduated in March, 1862. Accordingly, I have selected as my subject—

"Sixty Years of Surgery
1862—1922."

As you shall see, I decline to be a champion of the Past—a *laudator temporis acti*. The rôle I assume is that of a Herald of the Dawn. This early dawn will surely brighten, in your day, into the full light of day. We hand you the torch of learning and bid you God speed. Take courage, you fine, younger fellows, my cherished colleagues in the profession. Free from the many handicaps of our preceding generation, you have the greater responsibility. But I am sure that you will more than measure up to it—that you will more than make good.

I shall rapidly sketch surgical conditions during the 60's and 70's; and our then means and methods of surgical diagnosis and treatment. It is only by such a contrast and in some detail that one can appreciate the poverty of our knowledge and the meagreness of our resources in the 60's and your wealth of both in 1922.

This statement suggests a speculation as to what your orator sixty years later may have to tell. I dare not make the attempt; the actuality would doubtless put my prognostications to shame. Would that I could return in 1982 and converse with the Bigelows, the Grosses, the Mayos, the Flexners and the Lovetts of that wonderful day!

In the 50's and 60's, medical students were in an early developmental stage, a good deal beyond the "Old Stone Age," of course, but with some of its feral antagonisms still manifest.

The police and the medical students were far more intimately acquainted then than now. The professors, too, were frequently obliged to mediate between them. Rather often one of the Jefferson Faculty was hauled out of bed to haul a student in turn out of the lockup.

Their belligerency may be judged by a story told me by Dr. Weir Mitchell. It must have occurred shortly before 1860. A young man desired to enroll with him as an "office student." In questioning him as to his educational qualifications, Mitchell fortunately asked if he had any "accomplishments," whereupon he put his hand to the back of his neck, drew forth a bowie knife, and, without a word, implanted it deftly in the frame of Mitchell's window between two panes of glass. It is needless to add that he was referred to a more martial preceptor.

Indian wars were almost constantly in progress and arrow wounds, therefore, were not uncommon. The first case I ever personally cared for was a Regular Army Officer, a patient of my preceptor, Dr. John H. Brinton. An arrow had penetrated deeply just below the left eye. Severe secondary hemorrhage from the internal maxillary artery — a very rare accident — required ligation of the external carotid.

In 1876, when "Sitting Bull" was on the warpath, our German governess, ignorant of the curious Indian names, came to me in great perplexity. "Herr Doctor," she said, "I cannot understand what my German paper says about a 'Sitzende Ochse.'" When one thinks of it, a bull sitting on its haunches like a dog would be a rather odd farm phenomenon.

Physiology was in an elementary condition; Pathology hardly existed. Gross' "Pathological Anatomy" (1839) was the first American book on that subject. My course of lectures at the Jefferson on "Pathological Anatomy," chiefly surgical and only in the "Summer Course" in 1866-67, was the first course ever given in Philadelphia. Tyson's course in General Pathology at the University of Pennsylvania began in 1879. Harvard founded a Chair of Pathology in 1847, but Surgical Pathology was first taught unofficially by Warren in the late 60's. The first official course in Surgical Pathology was authorized in 1897. A laboratory was added as late as 1901. At Columbia (then the College of Physicians and Surgeons), the lectures on Pathology and Pathological Anatomy were instituted in 1888.

In 1865-66, I was a pupil in Virchow's Laboratory, with his little railroad on the long,

* An address on receiving the Henry Jacob Bigelow Gold Medal of the Boston Surgical Society, October 25, 1922.

continuous table winding to right and left, to propel his microscopes from student to student. A year later, in the Philadelphia School of Anatomy and the Jefferson, I used a microscope on a horizontal wooden base, with a vertical stage between the lens and a kerosene lamp. This was passed from hand to hand. *Per contra*, almost all of you are contemporaries of the epidiascope and the projectoscope.

Artists for medical drawing were scarce, and by reason thereof, and also of the *res angusta domi* of a young doctor, I made my own, copying them from Paget, Virchow, Billroth, etc. Even in our text books, crude wood-cuts were the best illustrations we knew. The splendid illustrations of to-day were far away. The "American Text Book of Surgery" (1892) was one of the earliest to utilize the new school of artists.

Spontaneous generation was then the battle-field. Just after the Civil War, in Paris I was a pupil of Pouchet fils, whose father was Pasteur's tenacious opponent, so that for the time, I was near the center of that long and bitter fight. Experiment after experiment seemed to prove the truth of spontaneous generation, but Pasteur always found the weak spot in the experiments of Pouchet and others, and dealt a death stroke. By the 70's, spontaneous generation was as dead as Julius Caesar.

Evolution and Darwin's "Origin of Species" (published in 1859, the year I graduated at Brown), had caused a volcanic explosion which gradually subsided save for sporadic eruptions. The recrudescence of this fight fifty years later is a curious but surely only a passing phenomenon.

Clinical surgery was well established in 1860, but it was very crude and simple. We had two clinics each in Medicine and Surgery on Wednesdays and Saturdays. Whenever there was a capital operation to be performed, such as even an amputation of leg or breast, it was known beforehand and then we all rushed to get front seats, as described in that medical classic, "Rab and His Friends."

Thank God, in the 60's we had one great boon —Anesthesia! My elders have described to me the horrible ordeal an operation was for patient, surgeons and witnesses before 1846. The screams and struggles of the patient were heartrending. To add to the horror, the then means for checking hemorrhage were primitive and largely ineffectual. The operating room resembled a slaughter house.

Observe the influence of the "Death of Pain," as Weir Mitchell justly called the result of the introduction of anesthesia. In the five years (1841 to 1846) in the Massachusetts General Hospital, only 184 operations were done; that is, 37 in a whole year, or three a month. Now, in any large hospital a score every day excites no remark.

Boston is rightly proud of her preëminence in the introduction of anesthesia. October 16, 1846, is a red-letter day, not only in the Annals of Surgery, but in the Annals of Mankind.

In December, 1847, Sir James Y. Simpson, of Edinburgh, first used chloroform. For years those two were the only anesthetics. Only for a few years have we had instruments of precision to measure accurately the dose of these anesthetics.

In 1884, local anesthesia by cocain was introduced by Koller. The number of the local anesthetics is now large, and the end is not yet.

In 1909-10,[1] Meltzer and Auer introduced Insufflation Anesthesia, a great improvement in special cases.

Nitrous oxid, a long-established anesthetic for such brief operations as drawing a tooth or opening an abscess, later was combined with oxygen, and, largely through the efforts of Crile, the further combination of these two with novocain, or other local anesthetic, has been a most important advance, greatly reducing shock and mortality.

In the 60's, assistants in the dissecting room often came directly to the surgical clinics to assist in the operations, soap and water being the only disjunctive conjunction, for we knew nothing of germs and germicides. The same revolving table was used for the cadaver in the lectures of the Professor of Anatomy, and for the surgical operations in the clinic. The surgeons — Pancoast, Gross and all the others — operated in discarded, blood-stained coats, the veterans of a hundred fights.

There were no ward classes. Students only looked on at operations. Had I not been a private "office student" with Brinton and DaCosta, I should never have palpated, auscultated or percussed a patient's heart, lungs or abdomen, never have looked through a microscope, even then an infrequent privilege. No medical college had a microscope for instruction.

The microscopes of that day were far behind those of to-day in mechanical construction. There were no oil immersion lenses, no dark field illumination, no ultra-microscope. The only stain was carmine, followed by acetic acid to clear the specimen. There were no compound stains.

The whole teaching Faculty consisted of seven Professors and one Demonstrator (Anatomy).

All the sacred seven courses began at once. Hence, in my first surgical lecture, I heard about blood corpuscles and capillaries which I had never seen, and the buffy coat, of which my only idea was that it could not be an article of apparel, but had something to do with the blood. Even now I would not covet a too minute examination as to the said buffy coat. Forgive

[1] Medical Record, N. Y., March 19, 1910, p. 411.

me if I suspect that you, too, might pass by only a narrow margin.

The first operation I ever saw was removal of an upper jaw by that prince of operators, Joseph Pancoast. It is always a rather bloody one. I had just swallowed my luncheon. By throwing out all my grappling hooks, I barely succeeded in holding it down.

At the Jefferson, we had two rooms, with five or six beds each, for the most serious cases, over a saloon conveniently adjoining the College. When Gross reached his lecture on Suppuration, he usually said to the orderly, "Hugh, go over to the hospital to-morrow morning and get me a half tumblerful of pus for my lecture." He might well have been less modest as to the amount, for "laudable pus" was "on tap."

Save the dissecting room, not one laboratory existed. Now at the Jefferson we have eighteen laboratories.

The very first Laboratory of Research in the United States was established in 1884 by Mr. Carnegie, in connection with the Bellevue Hospital Medical School. The Blue Cross has recently published a list of eighty-six such laboratories, all doing fine work for science, for animals, and for mankind.

As late as the 80's, and even into the 90's, there were, in most hospitals, no trained nurses. The nurses were chiefly women of very moderate intelligence who had gained experience by the rough method of "trial and error," and the "error" might easily have been in your own case or in that of one very dear to you. If so, your fervent prayers were sorely needed.

Hospitals were then avoided as if leprous, instead of being our best refuge. The wards were full of fear and not seldom of despair, instead of, as now, of hope and alert expectation of recovery.

Even the surgeons themselves were none too well trained. I well remember, at the First Bull Run, when I was but a First Lieutenant, and had not even graduated, but had already been well trained by Brinton in operative surgery, I was holding an arm for an amputation at the shoulder joint. The operator's assistant, a Major, was vigorously compressing the subclavian artery *below* the clavicle. I felt compelled, for a life was at stake, to intimate very modestly that possibly the pressure might be more effective *above* the clavicle. He turned upon me a withering face and voice and said, "The very name of the artery is *sub*clavian," leaving me wilted but not convinced. When the operator divided the great blood-vessels in the armpit, a violent gush of blood followed, which I quickly arrested by seizing the severed vessels, as Brinton had taught me.

On another occasion during the Civil War, as the surgeon I was assisting in an amputation of the thigh was about to sharpen the stump like a lead pencil by cutting the flaps upward, I averted disaster by suggesting, very *sotto voce*, the reverse direction for the flaps, and this time was thanked for it.

The only speculum we had in common use to examine any internal organ was that abomination, the tubular uterine speculum.

Many surgeons had handled kitchen spoons, but it required the "prepared mind" of Marion Sims in 1849 to transform such a spoon into a wonderful surgical aid by simply bending the handle. But it did not come into general use for some years. The bivalve speculum came still later.

Helmholtz had devised the ophthalmoscope in 1851; Czermak, the laryngoscope in 1860, but so slight an impression had the latter made that when I asked my preceptor Da Costa, in 1861, what he thought of the statement of Green of St. Louis that he actually could *see* the vocal chords, he replied in a doubtful tone that he "*thought* it might be true." But I never saw them myself until after the Civil War.

Similarly, the medical use of the thermometer was practically unknown. We judged of fever by placing the hand on the arm or neck. But we never estimated it in degrees, only in adjectives as "none," "slight," "considerable," "high" or "very high." I doubt if there were half a dozen thermometers in the Army of the Potomac. Mitchell, Morehouse and I had to import those we used in Turner's Lane Hospital in 1863-64.

The first book on Medical Thermometry was published by Wunderlich in 1868. The first short "Clinical Thermometer" (devised by Sir Clifford Allbutt in 1867) I ever saw, was brought to me from London in 1876 by Weir Mitchell.

Imagine the mother of half a dozen children to-day without a thermometer as a guide to whether the doctor should be called!

To-day we all recognize the scientific value of the thermometer, but we sometimes overlook its value to the doctor as a life preserver against the garrulous. In severe cases of loquacity, I have known a certified one minute thermometer to require even more than five minutes to reach its acme of accuracy!

Again, you are the contemporaries of Radium, which gives promise of great usefulness, and of the *X*-rays. You know the value of these rays in diagnosing fractures, foreign bodies in the heart, lungs, intestines, and the tissues, and in the diagnosis of cancer of the stomach and bowel, and the arrest of their contents by any obstruction. Now you can even *see* a sclerosed artery in its course down the arm. Cerebral Ventriculography was unknown until 1919.

Of the blood, our knowledge was most primitive. We knew its two kinds of corpuscles, but nothing of leucocytosis in its relation to inflammation, or of the four different categories

of blood. Blood was simply "blood." We knew nothing of the color index, nothing of blood pressure (save as inaccurately estimated by the pulse), and its great importance in operative surgery. The electro-cardiograph was not even a dream.

In 1866 I visited Marey's laboratory in Paris to learn how to use his lately devised Sphygmograph. He tested my own pulse and told me it was weak. But time has shown that what it has lacked in vigor it has made up in pertinacity.

We had no knowledge of test meals. The stomach tube was practically used only in cases of poisoning. To-day, Charles Mayo writes: "I should prefer to see a stomach tube rather than a stethoscope hanging around the neck of my surgical intern."

I have a vivid recollection as a lad of my reluctance to acknowledge that I felt "sick" until I *had* to, because it meant invariably the nausea following a horrid home emetic and then the bitter epsom salt or castor oil—ugh! One of the advantages of Gross' famous "Antimonial and Saline Mixture" was that the two enemies went down arm in arm at a gulp.

Practically *every* patient in the hospital wards was taking alcohol. One of the staff of the Pennsylvania Hospital recently told me that now only two patients in his present large service were getting any alcohol, and he was in some doubt of its wisdom even in these two.

Here I must stress the chief advance in scientific and practical surgery ever made—the development of Bacteriology and its application to surgery by the antiseptic method of Lister.

Vaccination (May 14, 1796), Anesthesia (October 16, 1946), and Antisepsis[2] are the three greatest blessings in the realm of medicine conferred on man since the Christian era began.

Pasteur's work was fundamental. Lister's genius applied Pasteur's discoveries to surgery. This wrought the greatest revolution surgery has ever witnessed. The Germ Theory of Disease is no longer a theory, but an abundantly proved *Fact*. Those who deny that the Tubercle bacillus, the Typhoid bacillus, the Diphtheria bacillus, and other germs, do not cause the diseases named, have minds that are simply impermeable to any arguments addressed to reason or common sense.

Originally, the antiseptic ritual was complicated, now it is very simple. At first, the germs in the atmosphere were believed to be our chief enemies. Now we know that they exist on every material object, and that death hides especially under the shelter of the surgeon's finger nails. They exist on the skin of doctor, nurse and patient, on instruments, dressings, ligatures, in unboiled water and other fluids, and are carried by many animals and insects. In fact, deadly germs are ubiquitous. *Everything* needs to be disinfected before the operator, assistants or nurses dare touch it or allow it to touch a wounded surface. All of this knowledge has been achieved since 1867.

While I was writing this, a non-medical friend told me that the birth of one of his children occurred unavoidably in the country. When the doctor, a dear old man beloved by the whole community, arrived, the nurse offered him a basin of bichlorid solution for his hands. He declined it, saying, "No thank you! I don't need it. I washed my hands just before I hitched up my horse." "The date?" you ask. Nineteen hundred and three. You and I may smile at such ignorance, but, in all soberness, may not this explain some needless tragedies of maternity in 1923?

No one particular year can be assigned as the date of the introduction of Antisepsis. Pasteur's famous papers on Lactic Acid Fermentation and on Alcoholic Fermentation were read in August and December, 1857. Lister's first paper was published in 1867. Bacteriology and Antisepsis went hand in hand. They had to fight for their lives. Their chief opponents, I am sorry to say, were the ultra-conservative surgeons. False friends betrayed them. Argument assaulted them. Ridicule tried to discredit them, as when one well known and able surgeon declared that he "stood at a distance and cast septic glances at the patient."

But Bacteriology and the Antiseptic Method marched steadily onward and finally won all the world by the late 70's and early 80's, saving a few fossil doctors and the ignorant antivivisectionists. Asepsis was a natural development. The scientific basis of both Antisepsis and Asepsis is identical, the only difference is the means by which to attain the same end.

Until the 80's or 90's we had no vaccines against the various disease-producing germs. Smallpox was the only enemy we could combat by vaccination. Even today we do not know its cause. That is a problem for *you* to solve. We had no serums. We knew not how to prevent tetanus, diphtheria, malaria, yellow fever and other diseases, of which we have now the whiphand.

Surgical tuberculosis could not be definitely diagnosed in bones, joints, or in what we called "scrofula," because we knew not the real cause of tuberculosis until 1882. Not knowing the cause we could not know that tuberculosis was contagious and was spread by spitting, coughing and in food. No protective measures for the well were even thought of. The consumptive was thought to be doomed (and in fact was doomed) from the moment the diagnosis was made.

In a word, we had no knowledge of Bacteria and Bacteriology. That science was fragmentary even down to 1884, by which time it had

[2] Under Antisepsis I mean, of course, to include Bacteriology. In reality, Antisepsis and also Sanitation are largely "Applied Bacteriology."

become systematized and first acquired its name.

We knew nothing of endocrine glands and their important functions—nothing of hormones and their mechanism.

Of course, we had no Schick test, Noguchi test, Pirquet test, Wassermann reaction, etc. We knew nothing of the spreading of diseases by the fly, the flea, the mosquito, the louse, the rat, the cattle tick—and hence we could not take any protective and preventive measures against them.

The whole human race and our animal friends were besieged before and behind, on the right and on the left. We were not only defenseless, we were not even aware that these enemies existed.

The only barrier which could be erected was a quarantine against those persons and goods which might carry infection. It was believed that clothing, bedding, etc., could carry the infection of yellow fever. Quarantine at first meant forty actual days (*quaranta*) of detention, often under disgusting and sometimes brutal conditions, sometimes with shot guns ready for any attempt at evasion, and it was useless as we now know.

Our then so-called sanitation was ineffective because our real enemies—the bacteria—were unknown. Now sanitation is our principal reliance because its sound basis is Bacteriology.

The operative surgery of my surgical youth consisted briefly of—

(1) Amputations, most of which we can now avoid
(2) Ligation of arteries, especially for aneurism and secondary hemorrhage
(3) Occasional excision of joints—not seldom fatal
(4) Removal of external tumors, such as cancer of the breast
(5) Ovariotomy. But this was not done until the tumor was so large as to imperil life.[3]

Surgeons who removed ovarian tumors were persecuted. As a student, I even heard them called murderers in the Jefferson Clinic because "two out of three of their patients died." It ought to have been worded, "one out of every three recovered," for every recovery was a rescued life.

In 1846, Mutter, one of my predecessors in the Chair of Surgery, said, "It is certainly hazarding but little to assert that in a very few years ovariotomy will be assigned to the oblivion it so well merits." Now, thanks to McDowell, the Atlees, Pasteur and Lister, and many others, the mortality is less than one in a hundred.

[3] As an instance of this delay, years ago I removed a huge ovarian tumor, which weighed 111 pounds, from a young girl not yet 15 years of age. After her recovery she herself—that is what was left of her—weighed only 68 pounds. Dr. Freeman, my son-in-law, when I told him of this, lifted a warning finger and said, "Father Keen, Father Keen, be very careful or some day you will throw away the wrong piece."

In 1876, in reviewing American Surgery for the preceding century, Professor Samuel D. Gross could only quote[4] seven operations for goiter by Greene of Portland, Maine, of whom five recovered and two died, and Maury's two cases, of whom one died, a mortality of respectively thirty-five and fifty per cent.

Of 1834 cases of operation on all varieties of goiter in the Mayo clinic in 1919, only twelve died, or two-thirds of one per cent.

6. Cutting for stone in the bladder had long been done. The method of performing lithotomy, in my early surgical days, was a legacy from pre-anesthetic days when speed was essential on account of the horrible pain. It was like the "hundred yard dash." Surgical guests (for it was a "show" operation), as well as students, watch in hand, timed the operator. He who could triumphantly hold up the culprit stone in the grasp of his forceps in ten or fifteen seconds less than any rival, was by so much the better surgeon. When every moment was like an hour of agony, no wonder that such "slap dash surgery" was imperative. Even a tyro can see that all our finer, delicate, painstaking and artistic surgery was impossible when a patient, bound hand and foot and also held in the grip of several strong men, was unwillingly but unavoidably writhing with excruciating pain. Prolonged pain also exhausted the patient and was a serious addition to the probability of death.

In 1878, Bigelow introduced litholapaxy, *i.e.*, crushing of the stone and evacuation of the fragments, at one sitting,—an immense forward step.

7. In 1867, Bobbs of Indianapolis was the first surgeon who ever removed gallstones from the gall-bladder. Before that other similar sufferers were left to Mother Nature and she generally slew them in due season.

8. In my student days I often saw couching for cataract, *i.e.*, pushing the opaque lens down into the vitreous done by Pancoast and Levis, both general surgeons—how horrible that sounds to us to-day! The oncoming flags of Ophthalmology and the other several specialties were then just becoming visible above the distant horizon.

9. On the head, the chest and the abdomen was writ large, "Hands off!" And no wonder! Before the days of Lister, death from meningitis, from violent pleurisy or pneumonia, and from virulent peritonitis was almost always the result of any operation in these three cavities.

Even the cause of appendicitis—then called "perityphlitis," "local peritonitis" or "abscess in the right iliac fossa"—was not known till Fitz's epochal paper in 1886 revealed the appendix as the real criminal.

[4] American Journal of the Medical Science, January, 1876, pp. 431-484.

10. One strange exception was trephining. Archeologists have found even prehistoric skulls with multiple trephine openings in the same skull, the margins of the openings in the bone from previous operations being soundly healed. Trephining in my early surgical days was practically limited to compound depressed fractures of the skull with a large mortality.

11. There was occasional plastic surgery, especially in the making of new noses from the skin of the forehead, but the frequent failures left the patient still without any nose and with the unwelcome acquisition of a most unsightly scar on his forehead.

12. Before 1895, Tracheotomy for diphtheria,[5] then called "membranous croup," was a frequent tragedy. How often I have stood, knife in hand, awaiting the decision of the agonized parents. Not only they, but I, too, knew by an only too frequent dread experience, that grim death was awaiting his almost assured victim.

In 1895, the blessed antitoxin was discovered and, presto! as if by magic, tracheotomy for diphtheria became infrequent, and for years past, one may say, has been unknown! Never can I forget, when I was twelve years old, the death of a darling younger brother who was allowed to be choked to death before our eyes by this now almost vanquished monster.

13. Operations for the radical cure of quiescent hernia were rarely done. They were often a failure, and always a danger. When a hernia became strangulated, its reduction by manipulation was first tried, and was often repeated two or three times under ether. Even if ultimately apparently successfully reduced, we took the chance of a reduction *en masse* with still persisting strangulation, or of a possibly gangrenous condition of the bowel promoted by the repeated manipulation itself.

To intestinal obstruction proper, Gross' "Surgery" in 1859 gave only two-thirds of one page. He said, "Internal strangulation is generally a fatal disease, its very obscurity forbidding interference." Why did he not advocate opening the abdomen quickly, before great damage had been done, and dispel this "obscurity" by the light of day? Because Bacteriology was yet unborn, because Pasteur and Lister had not yet, by experimental research, made abdominal operations safe.

What, then, was the treatment Gross and Erichsen's contemporary text-books in 1860 suggested? Let me recount it to your astonished ears! Calomel and opium, leeches, fomentations which sometimes, they said, relieved "even the most hopeless and complicated cases." If not, then "after three or four days" one might operate. Today, thank God, sharp steel quickly lays bare the cause, and provides the life-saving procedures at once.

[5] So called from the tough "leather" like membrane, which forms in the throat and extends into the windpipe.

Our methods of performing these dozen operations were simple—and often fatal. Our hands were, as a rule, as clean as those of a gentleman, but were never disinfected. The patient's skin was similarly clean or cleansed, but not disinfected.

For preventing hemorrhage we had only the Spanish windlass and Petit's tourniquet—no Esmarch's bandage, and elastic tubes.

Our instruments, from germ-gathering, velvet-lined cases, were laid out on a table—and not disinfected. If they needed a little sharpening, I have—not often, but actually two or three times—seen them stropped on the boot, and even on its sole. If an instrument fell on the floor, it was swished in a basin of unsterilized water, and plunged into the wound without disinfection.

We had no artery forceps, hence, primary hemorrhage was profuse. It was arrested by seizing artery after artery separately by a tenaculum—a hook with a handle—and tied with undisinfected silk. One end was cut short, the other left long. All these long ends were gathered in one or two bundles, and left protruding from the wound. After amputation of a fleshy thigh, I have seen twenty or thirty of them. The two or three ligatures on the larger vessels were identified by a knot, the largest by two knots. After a few days, each non-knotted ligature was pulled upon to ascertain whether it had rotted —mark the word—rotted loose. No traction was made on the knotted ones for a week or more. When they came away, if a clot had formed, well and good. If not, then a furious secondary hemorrhage followed, and often required the reopening of the wound to tie the artery again, or its ligation by a new incision higher up, or even a re-amputation. Sometimes the patient died almost immediately. In 2235 cases of secondary hemorrhage during the Civil War, 61.7 per cent. died.

During *one night*, when "Officer of the Day" at the Satterlee Hospital, ten days after Gettysburg, I was called to treat five cases of secondary hemorrhage and, I am glad to say, saved five lives. This was a larger number of such cases than I have seen in all my thirty-odd years of later antiseptic practice.

In 1869, Lister introduced absorbable catgut ligatures. They gradually won their way into favor. Now, as you well know, we cut both ends short, and close the wound entirely. This is usually followed by immediate healing, and we never hear of the ligatures again.

We had no modern retractors; the hypodermic syringes, and the aspirator were not in general use. These came into common use toward the end of and after the Civil War. The systematic use of the hypodermic syringe at Turner's Lane Hospital by Mitchell, Morehouse and Keen was exceptional.

Only marine sponges—round, flat, and "elephant-eared"—were used, both in clean and in suppurating cases! After using them in pus cases, we did wash them as thoroughly as possible, but knew not how to disinfect them. In fact, "disinfection" was a word unknown in the language of surgery in the 60's. Gauze "sponges" came into general use, as nearly as I can remember, in the late 70's or early 80's.

How were our wounds dressed? Take an amputation as a sample. Simple cerate was spread on a square of patent lint or on any old linen sheet, shirt, etc., clean but undisinfected. Then, by cutting from the four corners part way towards the center, we made a sort of Maltese cross. This was applied "cup-wise," one might say, to the stump, and covered with clean linen rags held in place by a recurrent bandage. This was pinned on, as we had no rubber plaster. The first "absorbent cotton" I ever saw I bought in 1876 at the Centennial Exposition. The amputation was redressed daily, and when "laudable pus" began to flow freely, twice or thrice daily.

On the second or third day the patient became restless and sleepless from pain and thirst, with a temperature, as I now judge, of 103 4/5°. In a week to ten days, when free suppuration set in, the fever fell to probably 100-101°, the appetite would improve somewhat, and sleep would be bettered; hence, the adjective "laudable."

If all went well, the wound would be healed in four, five or six weeks. But very often all did *not* go well. Secondary hemorrhage, erysipelas, gangrene, blood poisoning would develop, and then the patient who escaped with life, after two, three or four months, was fortunate. The many ligatures, until they sloughed away, caused constant suppuration, with constant danger of blood-poisoning. The mortality was dreadful, as compared with our present almost certain recovery.

My happy, younger surgical colleagues, you cannot imagine the Paradise you have been born into, compared with the Purgatory in which we lived for so many years.

In dislocations of the hip, and sometimes of the shoulder, the barbarous block and pulley were used. They could apply great force. In the old Jefferson amphitheater there were heavy hooks opposite each other for using this apparatus. The patient was anesthetized and laid on the floor. A strong perineal band, to hold the patient in place, was fastened to one hook, and the pulley to the other. By stout linen bandages or a broad leather band, the pulley was then fastened to the leg or arm, and then tremendous force was applied till it seemed as if the leg or arm would be literally torn away from the trunk.[6] What a blessed relief your own—may I not now say our own—Bigelow (1869), and later Kocher and others brought to these unfortunate patients by using gentle manipulative methods based on anatomical and surgical studies and experiments, in hip and shoulder dislocations!

More than once, too, in Paris, I saw tumors removed by Chassaignac's "Ecraseur." A strong wire or linked steel chain encircled the base of the tumor, and passed through a small opening. Gradually, by the handle, the wire or chain was screwed tighter and tighter until it mechanically crushed its way through the tissues. You may thank God you never saw such diablérie.

Fractures of the base of the skull were almost uniformly fatal, because we had no means of disinfecting the cropharynx. Indeed, we did not even know that such disinfection was either needful or possible!

Look up what Gross and Erichsen, in 1859, say about "Mastoid Disease." You will look long and look in vain.

Sir William Macewen of Glasgow, the protagonist of cerebral surgery, and happily still living and working, has given an authoritative chronology of its beginning in his presidential address before the British Medical Association on July 25, 1922.[7]

His opening words, "In my student days physiologists taught us that the brain acted as a whole," vividly recall to my mind the notable symposium on Cerebral Localization, in Washington at the First Congress of American Physicians and Surgeons in 1888. Among the speakers were Charles K. Mills, Roswell Park, Allen Starr, Robert F. Weir, Dr. (now Sir) David Ferrier and Mr. (later Sir) Victor Horsley, both of London, and myself.

I then compared the head with the abdomen, each containing a number of viscera, wholly separate physically in the abdomen, but in the head physically fused into one mass—the brain—but separable physiologically and pathologically. This is today commonplace, but then was a novelty.

In 1867, Hughlings Jackson had foreshadowed cerebral localization. In 1870, Fritsch and Hitzig had applied electricity to the brain of dogs. In 1883, Ferrier[8] had emphasized the idea of cerebral localization of functions, and had urged surgical interference in proper cases. The *Lancet* (Nov. 10, 1883), in a long two-page editorial, rejected this proposal, and closed with these words: "If Dr. Ferrier's suggestions meet with much practical response, it is to be feared that cerebral localization will soon have more deaths to answer for than lives to boast of."

Yet Macewen, in his address, states that, in 1879 a cerebral tumor had already been diag-

[6] Look at pp. 454 and 455 of Vol. 1, of the 2nd edition of Gross' "Surgery," or at p. 263 of Erichsen's 8th edition, both published in 1859, and see these instruments of torture. You can see their predecessors in any edition of Ambroise Paré or of Scultetus.

[7] British Medical Journal, July 29, 1922, p. 155.

[8] Medico-Chirurgical Transactions, 1884, p. 33.

nosed by this means, and successfully removed by operation, and several others also had been operated on up to 1883. Apparently, this was not generally known. Horsley's paper on the Topography of the Cerebral Convolutions[9] was to me a revelation as novel and illuminating as the mapping of Central Africa by Livingstone and Stanley. All of these motor centers have been determined by experiments on animals, confirmed later by clinical and pathological data in man.

I embodied the contents and the illustrations of Horsley's paper in my edition of Gray's "Anatomy" (1887). Also, at the Congress in 1888, I presented the three specimens, and the three patients constituting my first three cases of modern cerebral surgery, all diagnosed absolutely by cerebral localization. My very first case was that of a large tumor, removed in December, 1887. This patient lived until 1917, thirty years after operation. During all of that long period he had lived with no roof to his left lateral ventricle save the scalp.

To name even a partial list of our own colleagues who have contributed to the development of cerebral surgery is impossible for want of time. But all of us will gladly pay tribute to the eminent services of your distinguished townsman Harvey Cushing.

In 1888, Gowers' and Horsley's paper[10] describing the first localization and subsequent removal of a tumor of the spinal cord, was a momentous forward step.

The institution of drainage for empyema in 1854, by Henry I. Bowditch, your own distinguished townsman, was a wonderful boon. The modern, open treatment of surgical affections of the lungs and pleura, needed the Great War to develop its greatest usefulness.

Chevalier Jackson—who has created and developed a wholly new department in Surgery, removal of foreign bodies in the air passages and the esophagus through the mouth—was not born till 1865. Tracheotomy for such foreign bodies disappeared when Jackson waved his magic wand. Foreign bodies, such as coins, etc., if swallowed, it was hoped, would pass, and if they did not, rarely indeed was any surgeon bold enough to remove them by operation in that day of infection and death.

Even in gunshot, stab, and other similar wounds, in which the three forbidden cavities were already opened, we operated reluctantly, and with a timidity justified by the lethal results.

So far in this rapid review, I have told you what we *dared* not do and *could* not do in the past. Let me now swiftly recount by glorious contrast some of the things that we now *can* do, what in fact are *almost a daily routine* in every great hospital.

After a single battle in the Russian campaign, Larrey, Napoleon's great surgeon, performed not less than 200 amputations. Today, of 200 similar cases, sometimes even with wounds involving joints—a great additional danger—we can conserve the majority of these useful limbs without amputation.

External tumors of any size are now removed from all parts of the body without fear of a frequently fatal erysipelas, which a century ago so worried Sir Astley Cooper before he operated on the King for a simple wen.

The mere fact that any tumor is internal—inside the head, chest, abdomen or pelvis—has little influence on the decision whether it should be removed or not.

In the head, the new surgery trephines without hesitation, for trephining *per se* now involves very slight danger. Tumors of the brain are removed, abscesses opened, the ventricles are punctured with impunity or distended with air for diagnostic purposes. Foreign bodies are removed and the Gasserian ganglion, and even the hypophysis and the pineal gland are no longer beyond the surgeon's reach. Spinal tumors are now exactly located, and are constantly removed.[11]

I have already given you the data for goiter and tracheotomy for diphtheria.

In the chest, that very citadel of life, the heart lies in a straight line only one inch from the surface, yet, as Frederic Lee has strikingly said, it took surgery, with laggard step, twenty-four centuries to travel that one inch. Now, the heart is sutured for stab and gunshot wounds, with a recovery of over 50 per cent. Foreign bodies, revealed by the uncanny x-rays, have been removed even from its interior.

As I am writing this, Allen and Graham[12] have shown that in dogs it is possible to make a small opening into the cavity of the left auricle of the heart, insert a small tube with a lens at the further end, illuminated by an electric lamp, and study—not in less than three minutes, as heretofore, but at some leisure—the condition of the mitral valve, and, by a delicate knife, operate upon the valve itself. The mortality in the dogs, of course, has been high, but certainly will be greatly lessened with a larger experience. I fully expect that in time this method may be made safe enough to be applied to man himself. And yet there are those who wish to prevent such a beneficent research!

The esophagus is attacked for cancer, large portions of the chest wall are excised, foreign bodies removed, and the lungs can now be operated on at leisure, thanks to insufflation anesthesia!

The stomach is opened with impunity for the extraction of foreign bodies; portions of its walls are removed for cancer, and for ulcers,

[9] American Journal of the Medical Sciences, April, 1887, p. 342.
[10] Medico-Chirurgical Transactions, lxxi, 1888.
[11] Frazier and Spiller alone have just recorded fourteen such cases—Journal of the American Medical Association, September 23, 1922.
[12] Journal of the American Medical Association, September 23, 1922, p. 1028.

to prevent these latter from developing into cancers; even the entire stomach has been removed, and at least temporary recovery has followed. Early operations may hereafter enable us to say permanent recovery has been achieved.

As to the intestines, we have yet to find any condition or injury which prohibits our interference, and nearly always with success, unless the disease has gone too far, and the injury is too extensive. We open the bowel to remove foreign bodies which, if they have escaped us in the esophagus and the stomach, become our prey in the bowel. We remove even many feet of the bowel, and, unless the removal is too extensive, without any appreciable effect on the political economy of the abdomen. When we have abstracted a part, we unite the two open ends of the bowel, and thus re-establish the continuity of the alimentary canal. Of this, happily, after even eleven years, I am, myself, a surviving, grateful witness.

We short-circuit the intestinal contents. We remove the appendix almost "while you wait." If done early, its mortality is negligible. If the appendix is healthy, we can utilize it as a means for irrigating an inflamed colon.

Hernia is now a curable condition, with no appreciable mortality. Strangulated hernia and intestinal obstruction, if quickly operated on, have now only a small mortality.

We remove tumors of the liver, and successfully treat wounds of its substance. Gallstones and even the entire gall-bladder are removed every day or two. In one case I removed 301 gallstones. That last one I was particularly glad to find, and record as a proof of meticulous truthfulness.

The spleen is anchored, sutured, or even removed at will. We wonder why there should be any appendix, gall-bladder or spleen, for the patients seem to get along quite as well without them as with them. Possibly they persist by the forgetfulness of some animal ancestor; and incidentally, for the benefit of us surgeons.

The pancreas is no longer inaccessible; the kidney is sutured in place, drawn outside the body for inspection, decapsulation, or incision if, as the x-ray will have informed us, there are stones in its interior. A portion of the diseased kidney can be removed, or even one entire kidney, if hopelessly damaged by disease or accident. Stones in the ureter are also readily removed.

In the pelvis, the bladder is opened to remove stones or for tumors, and may be partially or wholly removed, in which case the ureters are made to débouche into the bowel. Removal of the prostate is almost an everyday operation, for which the aged patients are most grateful for their relief in most cases from intolerable suffering. The uterus, ovaries, and the parovaria have a long list of life-saving, comfort-giving operations to their credit.

Was I not right when, years ago, I called the abdomen "the surgeons' playground"?

Listen again to Charles Mayo, in 1922: "In many years of active surgical work I have not seen death occur as a result of an unnecessary [abdominal] exploration . . . but many have died solely because exploration was done too late."

We suture and anastomose nerves or divide their roots, even within the spinal canal. We suture blood-vessels, even in the new-born, in case of life-threatening hemorrhage. We criss-cross arteries and veins to prevent gangrene, and Matas' endo-aneurismorrhapy has saved many a limb.

We successfully transplant skin, bones, joints, and even half-joints—a much more difficult procedure.

We are gradually throttling disease at its very birth, and *preventing* its onslaught upon the health of the world.

I end as I began. As a representative of the passing, and at my age I may say the past generation, with uplifted hand I thank Almighty God for the wonderful progress He has enabled our generation to achieve. I crave for you, my younger brothers, His abundant blessing. To you may it be vouchsafed to win still greater victories for Humanity.

New England Hospital Association.

ANNUAL MEETING WEDNESDAY, MAY 17, 1922, AT BOSTON MEDICAL LIBRARY.

(Continued from page 555.)

AFTERNOON SESSION.

Meeting called to order at two o'clock, by Dr. Howland.

DR. HOWLAND: The first business is the report of the auditing committee,—Mr. Lee.

MR. LEE: I wish to state that the committee has examined the books of the treasurer and has found them correct, and as stated in his report, and has endorsed them as correct as of May 17th.

DR. HOWLAND: You have heard the report of the auditing committee; what is your pleasure?

It was moved and seconded, and *Voted*, that the report of the treasurer be accepted.

DR. HOWLAND: The next business is the paper on "The Hospital as an Educational Factor in a Community," by Dr. Brown.

THE HOSPITAL AS AN EDUCATIONAL FACTOR IN A COMMUNITY.

By DR. THOMAS S. BROWN, Supt. of Mary Fletcher Hospital, Burlington, Vermont.

I desire to say at the beginning that I lay no claim to being the originator of all the ideas advanced in this paper; very many of them in fact I have acquired from others, but as they seem reasonable I should like to pass them on for your consideration. I am especially indebted for these ideas to Drs. Louis Jermain and H. C. Burdette.

The practice of medicine or physic, from which latter term is derived the word "physician," is as old as the human race; and is supposed from legendary accounts to have had its origin among the Chaldeans, Assyrians and Babylonians, the oldest known peoples of the earth.

The science of medicine, however, received its first real impetus in Egypt, where the opening of bodies after death to ascertain the cause of death was tolerated, and as early as 1100 B.C. there is said to have been a college of physicians in Egypt. Not only men, but women also became practitioners, so that we need not be at all disturbed at the increase of women physicians in this day.

Pliny, the historian, says that certain of the doctors were paid officers of the State, and were required to treat the poor free. They were not, however, required to go to the patients' homes, hence it is supposed that in Egypt, as in Athens at a later time, there were certain houses to which the poor came, something after the order of our dispensaries. These physicians were allowed to take fees from private patients even when in the employ of the State,—from this it would seem that State medicine may not become an immediate danger, since it has threatened so long. There has been considerable discussion in our section as to the proper relation of the public health official and the general practitioner and just how far the former should "hand out" his services without charge to the general public.

In the third century B. C. the king of India commanded that hospitals for the sick be established throughout the kingdom, and this was done by the nobles and landowners. Here patients from all lands were given free treatment. Many such hospitals were established in the fourth century and were described by a Chinese traveler in India.

By the first of the present century only one of these hospitals was still in existence and that was devoted to the care of animals instead of humans. This hospital covered an area of about twenty-five acres, and people of all castes could bring their aged animals here for care; and so much were these animals revered that bread and milk was furnished for them when they became too old to crop grass.

Among the first isolation hospitals were those established for the segregation of people suffering from leprosy. Such a "House of Separation," as it was called, was connected with a large hospital built by St. Basil at Caesarea. This would seem to be the first attempt at preventive medicine, as the isolation was no doubt due more to the desire to protect the well than to care for the sick.

The ancient cities of Mexico had hospitals that were well endowed and attended by experienced physicians, according to Prescott's History of Mexico; and one writer stated that they were not only better than those of Europe, but that "they did not protract the cure in order to increase the pay." All of which goes to show that there are no new tricks even in the practice of medicine.

Of the early hospitals in modern countries we find that Hotel Dieu was founded in Paris in 600 A.D. St. Bartholomew's in London in 1123 A.D., or about that time. The hospitals in Germany came a little later, while in the United States the Pennsylvania Hospital is probably the oldest.

Until recent years hospitals have had as their sole object the care of the sick, and the restraint of the insane. It is only very recently that hospitals in this country have realized how large a part they should take in the education of the healthy; and that their obligation to humanity does not end with their treatment of the sick. However, some hospitals find it very difficult to meet this obligation; in fact, do meet it only partially and rather indifferently.

The true and full service which hospitals may and should render to the public has been very aptly set forth in a paper by Dr. Louis Jermain, Dean of Marquette University Medical School, entitled "The Educational Function of Hospitals." The ideas there set forth are relatively new in this country, although they were in a large part advocated by Henry C. Burdette, formerly Secretary and General Superintendent of Queens Hospital in Birmingham, England, and Registrar of the Medical School, in his extensive work on "Hospitals and Asylums of the World," which was published in 1893. Many, yes, most of the features which seem to be desirable and possible in a hospital were in operation in England at that time, which is about thirty years ago, and have since been seized upon by our American medical educational reformers. It would seem as if the ideas and reforms designed for the betterment of medical education in America were borrowed from a practice well established in England thirty years ago. Nevertheless the aim seems good, so we may perhaps review it with profit.

Dr. Jermain says: "All hospitals in cities where there is a medical school owe it to themselves and to the public to seek some teaching connection with such school. Hospital authorities should hold themselves responsible in a large measure for the training of the future practitioners of medicine, and the members of the staffs of hospitals." Granted that this statement is true and that such a relation does

exist, what is the field open to a hospital as an educational factor in a community?

For convenience let us take it up under these heads:

First—Education of medical students.
Second—Education of staff and medical profession.
Third—Education of nurses.
Fourth—Education of internes.
Fifth—Education of the public.

Education of Medical Students.

It is rather interesting to note that in 1893, according to Dr. Burdette, there were in this country only a very few medical colleges which had anything but the very loosest connection with hospitals. The University of Pennsylvania had its own hospital; Johns Hopkins also had its hospital as part of the medical department of the college; but Harvard had not as yet any direct connection with the hospitals of Boston. Many of the medical schools were giving only a two-year course; some three, and a few a course of four years. Yet at that time English medical students were receiving their training on the wards of English hospitals. In the last few years the training of students by bedside observation has become a general practice in this country, and all thinking people appreciate that it is of great benefit to the medical student in the third and fourth years of his course to come in actual contact with patients. He then has an opportunity to observe the theory which has been given to him by didactic lectures put to the practical test. Truly the clinic and bedside study of patients is the "laboratory test" which makes real the statements of teachers which would otherwise be dry and meaningless.

What then are the advantages to the student? 1st, it trains him to meet patients with tact; to be gracious, and to secure the confidence of the patients. 2nd: By history taking, he is taught to ascertain from the patient's own story all that may bear on the case. 3rd: It trains him to observe carefully, thus adding his own opinions to the facts brought out by the history. 4th: It teaches him not to jump at conclusions, but to delay making a diagnosis in obscure cases until all the known tests have been used either to corroborate or to contradict his impressions. 5th: It gives him a chance to familiarize himself with the technique of many of these tests by actually doing them or by securing the material for someone else to do the work, when the process is too complicated for him to do it personally. 6th: It gives him a chance to observe the results of certain lines of treatment which are under the direction of the most competent doctors connected with the institution. This includes the treatment of medical cases and the pre- and post-operative treatment of surgical cases.

What are the advantages or disadvantages to the hospital and patients of having the students on the wards? At first sight it would appear to be only a source of annoyance to the patients, and a nuisance to the hospital. But Burdette, commenting on hospital conditions in England, says, "The condition of residence in a hospital must always be strange at the outset to all patients. At first the presence of students may even be felt to be embarrassing, but this feeling soon wears off and is replaced by quite an opposite one, for by their kindness and skill students quickly win the confidence of the patients and their presence is a great element of brightness on the ward, and does very much to relieve the ennui and loneliness which might otherwise be felt. It is well known that patients are delighted, not grieved, when they find that their case is one of special interest to the students and one on which frequent demonstrations are made. Of course discretion is constantly called for that repeated examination is not harmful, but this discretion is rarely, if ever, wanting.

Dr. Osler says, "The work of an institution in which there is no teaching is rarely first class. It is, I think, safe to say, that in a hospital with students on the wards the patients are more carefully looked after, their diseases more fully studied and fewer mistakes are made.

Dr. Jermain says, "Medical students in a hospital are in a measure a guarantee of thorough work on the part of the staff and internes." May I add, if the staff and internes do their part. In a meeting of this sort I realize that there are many hospitals represented which do not have an opportunity to admit students to their wards, and I want to say that I believe this is a decided misfortune, for there can be no doubt that the student is a good stimulant to the members of the staff.

Education of Staff and Medical Profession.

If the hospital is a good place to begin the education of a doctor, or, perhaps, to educate the beginning doctor, it certainly is a place to *continue* the education of the doctor who is already at work. Plato tells us, "Education is a life-long process." No one will deny that the doctor who ceases to study and keep in touch with the rapid progress of medical science might better change his business. The hospital affords a place where the doctor can not only study his own cases but he is constantly rubbing elbows with other physicians. He learns what they are doing and is stimulated by this contact. Here he is able to make use of all the latest methods of diagnosis which the rush of his own private practice would not give him time to utilize even if he were thoroughly familiar with the technique. But best of all, and most serviceable to the doctor, is his contact with the students. He must at all times be at his best. Incompetency and bluff are quickly detected and sharply criticised by the students. Again Dr. Osler says, "There is not the keen

interest nor the thorough study of cases, nor, amid exigencies of the busy life is the hospital physician able to escape clinical slovenliness, unless he teaches and in turn is taught by internes and students."

But it is not to the students and internes alone that the doctor with hospital facilities can disseminate the benefits of his training. The man from a distance, who sends his patients to the hospital for treatment, frequently gains some new ideas on his visit to the hospital if the staff man does his duty and explains how he arrived at his diagnosis and what the nature of the treatment is. Every man's duty is to the public at large, and the more widely a man's influence is felt the greater the benefits.

The Education of Nurses.

So essential has the trained nurse become to the physician in order to accomplish the best results in every case and to secure any results at all in some cases, that it is impossible to comprehend what would be the state of affairs in the world without trained nurses.

And yet it is only since hospitals have taken such a prominent place in the care of the sick that it has been possible to train women for this useful service to humanity,—certainly nurses could not be trained without hospitals, nor could hospitals be run without nurses. The life of the nurse is one of the most arduous, and as a recompense she should receive the best of instruction; this she can receive to perfection only from the staff doctors. And it is her right to expect and demand her full measure of instruction as well as a liberal amount of criticism. The latter is always administered without stint, but altogether too frequently the doctor finds no time to carefully explain the why and wherefore of doing or not doing certain things. It is only by such a constructive procedure that a nurse can be given a well-rounded training. Many nurses are good imitators, and the result is a copy of some older nurse whose knowledge is often far from sufficient or satisfactory. It is the duty of the doctor to see that nurses receive intelligent criticism, which means patient and painstaking explanation of the way they like things to be done; if the way they have been done has not been satisfactory. All of this the nurse is entitled to in addition to the best of instruction from the training school teachers, but I am not in favor of making the educational requirements so high that every nurse would be trained for positions of responsibility, for though there is great need of efficient and responsible heads, we must not forget that what the patient needs is care and not a boss.

If the training of a nurse is what it should be it will prove a liberal education to her and make her not only a good nurse, but a useful citizen and the highest type of home-maker.

Education of the Interne.

The additional training and perfecting influence of the hospital has been so fully recognized that at the present time many medical colleges and some State boards are requiring a fifth year to be spent by the student as an interne in an approved hospital or in other acceptable clinical work before the degree of M.D. is granted.

While a student, a man is so crowded with new impressions and is so rushed from one thing to another that he has little time to digest what he hears and sees. But when he becomes an interne he perfects his laboratory technique; he learns care in diagnosis; he analyzes treatment; he learns to read people; he acquires a confidence in himself; he is invaluable to the hospital staff. Many a man who is an indifferent book and theory student becomes a cheerful and consistent worker when he is placed in charge of a ward of patients. The interne should have the benefit of association with the best of the profession; and if the hospital is a teaching hospital he has this association. The interne is the future guardian of the public health and every possible advantage should be given him to acquire skill and confidence. The average medical graduate is a man with a smattering of medical knowledge which he is unqualified to use. The hospital is a finishing room which turns a valuable raw product into a real public asset.

The Education of the Public.

How is this last and most important branch of hospital education to be accomplished? It is indeed a difficult task to make the public understand that by its service to the student, the staff, the nurse, and the interne, it is in reality serving the community. How many people state that "they won't be pawed over by students," little realizing that this "pawing over" is really the true and only scientific basis on which a diagnosis can or should be made. Only by a thorough and exhaustive examination can the real facts of a case be brought out, and the sooner the public learns that the student and the interne must be trained in the hospital or else go into practice untrained, the better. Without this the public would be in the hands of young and inexperienced physicians who would not have had the benefit of carrying out treatment under the direction of thoroughly competent older physicians.

It is altogether probable that few people die of mis-treatment at inexperienced hands; but it is also certain that some patients are constantly suffering from the effects of inefficient treatment due to a physician's lack of study sufficiently exhaustive to make an accurate diagnosis and to carry out the best treatment in each case.

We are still resorting too much to the old custom of treating symptoms. The public must learn that diseases are not properly studied

when we look simply at the patient's tongue; count his pulse and listen to his story.

We must therefore teach them that a careful examination may require several days; that the more men engaged in the study of the case the greater the probability that the real cause of the trouble will be ascertained and that students and internes take nothing for granted; consequently they are the best of assurances of thorough investigation. They must be taught that the staff doctor who is being watched and questioned by students and internes is much more eager and persistent in securing results than the man who is jogging along at his own pace. We must teach the people that the hospital is not a place of last resort, and to be avoided as the very entrance to Hades, but a place where early treatment produces the best results; that it is not a place where the impossible can be accomplished, but where certain advantages by way of diagnosis and treatment can be carried out more completely and successfully than at home; that the hospital is not a place where experiments in medicine and surgery are tried out regardless of the welfare of the patient. They should be made to understand that the well-being of the patient is always the first consideration and that the next is the study of all patients in order that the increase in medical knowledge may become a public asset available to all whether rich or poor.

The patient who refuses to have his case studied thoroughly is doing just so much to hinder the progress of medical science and is withholding from humanity just so much of benefit.

Thus far in this discussion we have proceeded as if all hospitals had a teaching connection with some medical college and were large enough to have internes and a nurses' training school. This of course is not true. There are very many hospitals which have no connection with any medical school, others which have no internes, and there are some which are not large enough to maintain a satisfactory training school. All of these things are a serious handicap. With the advent and recognition of the small community hospital now being advocated by the Rockefeller Foundation the number of hospitals with a limited service is constantly increasing. The directors and staffs of such hospitals should realize the tremendous responsibility resting upon them to maintain high standards of treatment. The hospital should furnish every possible advantage in the way of equipment and then require of the staff an unusual amount of devotion and considerable attention to details which is not required of the staffs of larger hospitals if they are to keep the hospital service from falling to a low grade. Unless carefully managed, these small hospitals will afford a place for men of very mediocre ability to impose their services upon the public. The welfare of the patient is the thing of primary importance. It must never for any reason whatsoever be replaced by any other interest.

The medical profession stands ready to give unstinted service; with the coöperation of the public every hospital should not only give good treatment (this is the least that it can do), but should also, to the full measure of its opportunities, contribute to the public welfare a well-planned program of education.

DR. HOWLAND: Dr. Brown's very interesting paper is open for discussion. Dr. Washburn of the Massachusetts General Hospital has thought of a good many ways of utilizing a hospital besides caring for the sick. Will you not open the discussion, Dr. Washburn?

DR. WASHBURN: Mr. Chairman, Ladies and Gentlemen:

One way occurs to me in which the hospital can be of great service to the community, and that is by furnishing an opportunity for the education of the physicians of the community who are not on the hospital staff. For a good many years—if I may be excused for speaking of my own hospital—certain devoted men on the staff of the Massachusetts General have given weekly clinics for the doctors in the community. Dr. Smith and Dr. Cabot, in conjunction with the pathologist of the hospital, Dr. Oscar Richardson, have given these clinics once a week, and the busy practitioners of the towns round about have given their afternoons to come in and get brushed up a bit in medicine, and the methods of the study of clinical records in conjunction with autopsy findings. That has, not only the value of keeping the physicians round about with their medicine brushed up a little and up to time, but has the advantage to the hospital of creating a friendly atmosphere with the medical profession. That is one way in which we try to keep in touch with physicians. Another way is to try to keep the doctor who sends in the patient informed as to the progress of that patient. We try to let him know when the operation is coming, and urge him to be present, and we let him know when the patient is discharged, what the findings are, and we try to send the patient back to him.

The matter of education in the hospital itself with pupils who come to the hospital goes a good deal further, or should go, certainly in a large hospital, a good deal further than the training of the doctor and the training of the nurse. For instance, dietitians can well be educated in hospitals. We have our trained dietitians and graduates who are paid by the hospitals, and in many larger hospitals we have pupil dietitians, who get practical training in the hospital in conjunction with a course at some college.

The training of hospital superintendents is one of the most important branches of hospital education. He comes in just like Topsy; he just

grows. In the past, the hospital directors, as they are coming to be called now, the hospital superintendents, have got their training by being assistants to older men in charge of superintendents, until gradually they got their own hospitals, which was a pretty poor way. That is not the way it should be, and in the future it is going to be better, I know. In fact, a committee on this subject is just issuing a report on the Training of Hospital Executives. The Rockefeller Foundation was good enough to meet the expense of such a committee. Dr. Edsall was the chairman, and certain hospital men and women composed the committee. We employed an executive secretary, who was paid by the Rockefeller Foundation, and who went about the country learning what he could on the subject. He has just written a report, which will be published within a month, I think. It is in the hands of the printer now. That report, I can't go into in detail, advocates a training of men and women for this work, so that in the future those who go into hospital administration shall have university education on such questions as public health, the social relation of the hospitals to the community, vital statistics, and business management, and such things as that; something that every one of you will admit that he would have been a more able man or woman, done his job better, if he had had that education. I have wished many times that I had had that education. What we have acquired, we have had to pick up by outside reading, and so on. It is hoped that some foundation, perhaps the Rockefeller, will start some such combined endeavor between hospitals and universities, and start on the training of hospital superintendents,—the Lord knows we need it.

Regarding the community hospital, of which Dr. Brown spoke, we have got to do something for our rural problem, which is getting very serious, and in many of our back country districts, as you know, they can't get a doctor without offering to build them houses, offering to pay them to come into the town. It has always seemed to some of us—these ideas are not at all original—that that thing can be met by these community hospitals. The small general hospital has grown up wherever the community has had a rich man who has given the foundation, or where the community has been urged by doctors to have a hospital, and it has grown up without any planning whatever. We have a lot of small hospitals in Massachusetts and throughout New England, and throughout the rest of the country, not more than half doing their jobs. Architects like to have hospitals built. The result is that there are little towns —and I could name half a dozen right near Boston—little towns side by side each with a hospital, whereas they ought to have concentrated all their endeavors in one good hospital, so that a patient could get all those things which we claim a patient can have and ought to have. How can you duplicate the man at the head of the staff? How can you duplicate the expert pathologist? the facility for making metabolism tests, and all the tests? You can't do it, and you don't do it. You are misleading people. If we could study these problems, and get our hospitals where they ought to be, and concentrate all the resources of a community on the right side, in one place, and bring to them the skill which they need, and from that centre send out all your visiting nurses, and to that centre bring all your skilled men; perhaps once a week from some larger centre have a man go down and do the tonsils and adenoids for that hospital, or a man to go down and do the orthopedic work, and have clinics,—then they could have the best of service in that one place and from that centre. You can educate your community in these health matters, and educate them to demand the kind of service they ought to have and need in the way of hospital service.

Dr. Howland: One of the chief things I had in mind in asking for a paper on this subject was to bring out, if possible, what the hospitals are doing to educate the people of the community; not merely in caring for the sick and educating doctors, but what they are doing to educate the people in regard to diseases. The Harvard Medical School has for some years given public lectures in which specialists talk to the community on various health problems. What is being done throughout New England, away from the big educational centres, in educating your own community, by the hospitals? Are you getting your doctors to teach the people the importance of early diagnoses and treatment, the dangers of pregnancy, and how to ameliorate those dangers? Will some of you not tell what you are doing?

Dr. Stetson, Greenfield: I plead guilty. I don't think we are doing very much—not as much as we should do. One or two things that we do is in the education of our own nurses. We have improved very much in five years in that respect, and that, I think, is something toward the education of the public, indirectly. We have once a month a visit from a representative of the Northampton Insane Hospital, and generally once a month a visit from a representative of the hospital for epilepties. Those men see anyone who desires to see them in reference to any nervous or mental ailment, either of themselves or any of their family. There are a number of persons who are insane, or were insane, or epilepties, who are out on parole, and they are asked to report at these times for observation, and to meet the representatives of the hospital in which they were patients.

I can most heartily commend the statement made by the reader of the paper, and also by Dr. Washburn, that the hospital has a great

deal of influence in improving the medical work as a whole, and among men not directly on the staff. They come into the hospital, and they find men on the staff doing certain things, and nurses in the hospital expect them to do the same things. But so far as the staff doing any direct instructive work, I don't think we are doing very much, except, perhaps, we have utilized the graduation exercises of our nurses to get someone to talk on some health matter. That has been of value. Dr. Richardson came up once and gave us a good deal of valuable information, and that is an occasion that a good many people remember. That is, I think, about all that we are doing.

Mr. Richard Borden, Fall River, Union Hospital: I have been very much interested in Dr. Brown's paper. I have always believed that education is a much more powerful influence than legislation, and as the topic has broadened out by discussion, the possibilities of hospital education of the community seem to be much larger than has been appreciated. I think, first of all, the most valuable educative feature of the hospital is the education of doctors who graduated from the medical schools many years ago,—an education that will never stop as long as rapid progress in science goes on; and in that connection one of the most valuable things done recently is the minimum standard requirement of hospitals. We have a monthly meeting of the staff, and those staff meetings have been so valuable to members of the staff that we have concluded to make them monthly clinical meetings, open to all members of the profession. There we have a discussion of subjects, or a demonstration of certain cases under treatment. A large number of general physicians in the town come to these meetings; we have a larger attendance, I think, than the branch of the Medical Society, and I feel that a great deal is being learned by physicians at these meetings.

Coming to Dr. Howland's suggestion about the education of the public: of course I love the doctors, but I don't hesitate to express some opinions about them once in a while. Before you go much further in educating the public in provincial towns you must educate the physicians to feel that they must have regard not only to their own pocket-books but also to their professional standing in the community. Their pocket-books won't suffer if people have a high regard for their professional ability. We now find patients coming to the x-ray department, and patients inquiring about radium treatment, who come to the hospitals, ignoring their physicians, telling that the x-ray man wants to see them, etc. Through the newspapers and other ways, education is getting very broad, education as to what may be done for them in health matters; and I can't help but see that a very considerable number of the medical profession are being outdistanced in possibilities of diagnosis and treatment by the reading and talking of the public. I think it is extremely important, where it can be done, to have these mysteries of hygiene disclosed to the public by the profession. They used to know nothing, only what they read in patent medicine or quack doctors' advertisements; but they are now getting more direct knowledge of what the truth of the matter is; and where it can be done with the coöperation of the medical members of the community it is an extremely valuable thing to do. But I imagine a large proportion of these doctors come from the smaller cities, and I suspect that they have more or less of the same difficulty with medical members that I have, and that such troubles as we have are not confined to our own city.

There is another way in which, I think, the educative function of the hospital is progressing, and that is by various bodies associated with hospitals in carrying on this work. The Women's Board of our hospital has a certain definite function. It is interested, not in the professional care of the patients, but in the more or less social welfare of the patients, and quite a number of the younger women serve on those committees. So that quite a number acquire knowledge of the effect on the community of disease, and what can be done to remedy it, and I think that knowledge is being spread by younger generations in the community life.

Dr. Howland: I have had a feeling for a long time that the doctor in the small community did not take the attitude of not wanting to teach the public because he feared for his pocket-book, but because he was afraid, if he talked in public, other doctors would think he was advertising himself, or would be afraid that one doctor was getting ahead of another. There must be some way to overcome that; and use all the good one could get in a series of lectures.

Dr. Richardson: I was at a convention at Washington recently, and I heard Dr. Vaughn say that the trustees of the American Medical Association had promised to establish a popular medical journal, which I think would be of very great importance along this line. If such a journal is established, it certainly will be up to the Hospital Association to have their interests represented, and printed in this journal from time to time.

Miss Doherty: Not much educative work is being done by our hospital. In "Cancer Week" we had prominent speakers from Boston both at Springfield and at Holyoke. Our doctors there are very fine in speaking before our Nurses' Association. I think they have also spoken for the Parent-Teachers' Association, and various organizations where they would reach mothers, and I think, perhaps, quite a little has been done in that way. We have a child-welfare commis-

sion, under the control of the city, and the doctors there, I think, reach a great many mothers. We also have free school-age clinics, and various things of that sort, where a great deal of work is being done. We do not have popular lectures such as Boston has at the Harvard Medical School. If anything special is being done, like tuberculosis work, or any of those things, we try to do our part. We have a Tuberculosis Society and various organizations, and our doctors give their services there, perhaps to a greater extent than in some smaller towns. I have found that the doctors are very ready to do anything we ask of them.

Miss Stevens, Laconia, N. H.: A few years ago, there was practically nothing being done in the way of educational work in the town. People came to the hospital, but we did not seem to be reaching out. We had no public health nurse, or any sort of public health work. I asked the trustees if we might send out one of our training school nurses to people, and I did that for a year. I went to different churches and told them what I should like to do, and that the trustees and the doctors were all willing to help us. I kept that up for five years, and at the end of that time the work had grown, and I felt that it was time to withdraw the training-school nurses from public service, and then the people in the town had come to feel that they couldn't get along without this work. Through the efforts of the hospital, the city has put in a full-time public health nurse and a full-time school nurse, and we now have a tuberculosis nurse, who covers our county and goes into another county.

Dr. Faxon, Massachusetts General: Dr. Washburn has hit upon a subject which has come under my consideration, not from the viewpoint of the hospital, but from the viewpoint of the practitioner. I studied the question in connection with other doctors in the community where I practised, and we were led irresistibly, in our own minds, to the opinion that the solution of many problems lay in the founding of small hospitals. These hospitals would stretch out in two directions, one to the general public. They would be collecting places, and the proper places to care for very sick people and for certain kinds of sickness. They would be the places from which visiting nurses should go out. They would be the natural places from which to send forth instruction from the boards of health to the people of the communities. They would be the centres from which to educate the communities in health matters. They would also be the places where doctors would receive education from specialists, who would come to the small community once in a while, once a week, or as often as necessary. In that way, they would keep in touch with the progress of the world. The chief thing that holds back doctors and medicine and everything in the way of treatment in the country is the fact that doctors have no time to go to larger communities for education. It isn't because they don't want to, or are afraid to, but because they don't have the time. In this way, you bring education to them, and they can get time to receive it, and will receive it, I am very sure. So I think putting forth this idea to a body of superintendents, who can, if they approve, of course, go out and spread this idea, is going to be a great help in solving these problems. It isn't an entirely original idea. I have found that others have preceded me, and that I was not the only one who had arrived at this conclusion. It seems to be a rather slowly growing idea. I hope it appeals to you, because I think it carries great promise.

Man: One thing we have done for the education of the public has been the giving by different doctors of popular talks to women's clubs; that is rather a good field through which to give popular medicine to the public.

The only objection that I see to the small community hospital is that the men in charge must be very carefully chosen. Unless they do receive some special training for the work, they will not be well prepared. The idea is fine. Undoubtedly, there are many rural communities suffering from lack of physicians, in northern New York, New Hampshire, and Maine. Massachusetts is not so badly off. There are towns where they have had physicians in the past and have none now; where one doctor is taking care of several towns. These men don't go away, because they can't; they have all they can do if they meet the demands made upon them to answer calls. Just because they are so busy, if a small hospital is started in the community where there is a group of such men, it is rather necessary that it should have at its head a man of superior ability, and not a man who without additional training takes on additional functions for which he is not qualified.

(To be continued.)

Book Review.

Medical Record Visiting List for Physicians. William Wood & Co.

The new edition of this record of a physician's work is an amplification of former issues. The 28 pages of tables and special information which precede the memoranda pages furnish valuable information in condensed form.

The record pages are no longer dated for any specific year, so that the diary can be begun at any time.

This record is published in sizes to cover 30-60 and 90 patients per week.

Current Literature Department.

ABSTRACTORS.

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MEDICINE, VOLUME 1, NUMBER 1.

THE initial issue of "Medicine" of 210 pages, is given entirely to two excellent articles, one by Robinson on "The Therapeutic Use of Digitalis," and one by Blackfan on "The Treatment of Meningococcus Meningitis." Both articles successfully fulfil the purpose of the periodical in providing authoritative reviews of the recent advances in clinical medicine.

Robinson's presentation of digitalis therapy is comprehensive and well arranged, and clears up many misconceptions regarding the use of the drug. After a brief historical survey of the use of digitalis he discusses the digitalis group and the potency of the digitalis bodies. Animal experimentation and the newer methods of clinical study of digitalis are next mentioned. The toxic effects of the drug are described and discussed in detail. Gastric symptoms seem to be largely, if not entirely, due to a central rather than a local effect of digitalis, and are inseparable from the therapeutic effect of the heart. The toxic effect on the heart, due to an overdose of the drug, may result in irregularities of impulse production, extrasystoles, partial heart block, pulsus alternans, etc.

In discussing the occurrence of fatalities in connection with the use of digitalis bodies, the point is made that in the practical use of the drug the therapeutic dose is very close to the toxic dose, but on the average is only about 50% of the lethal dose. "The maximum therapeutic effects are probably produced in man by the administration of from 30% to 40% at most of the lethal dose."

The therapeutic effects of the digitalis bodies are divided into four groups—those on the heart muscle, those on the cardio-inhibitory mechanism, those on the blood vessels and those on the kidneys. Proofs for the direct action of the drug on the heart muscle are given in detail. The relation of digitalis to cardiac hypertrophy is left an open question. The effect of digitalis in decreasing the rate of the heart is considered to be due to stimulation of the cardio-inhibitory center and also to a depression of conduction of the cardiac impulse from the auricles to the ventricles. In individuals with normal hearts digitalis produces slowing only when the vagus center is unusually sensitive to stimulation. The evidence seems to prove that the production of heart block by digitalis can occur only in hearts in which the conducting mechanism is already damaged. The benefits derived from the production of heart block in certain types of diseases are emphasized. In discussing the evidence against any direct action of digitalis in the blood vessels, Robinson states that arterial hypertension does not contraindicate the use of digitalis, and may in fact be advantageously effected by its action. The action of digitalis on the kidneys or its vessels is said to be "as yet unsettled, although it has been abundantly demonstrated that digitalis has no diuretic action except under very special conditions."

The discussion of the use of digitalis in heart failure occupies some twenty-five pages, and concerns itself in detail with the various types of cardiac failure,—auricular fibrillation, auricular flutter, cardiac contractions of abnormal origin, paroxysmal tachycardia, heart block, myocardial insufficiency, pulsus alternans, valvular defects as such, effort syndrome, and hyperthyroidism are all considered. The point is distinctly made that in considering the therapeutic use of digitalis, it is as necessary to take into account the various cardiac derangements responsible for heart failure as it is the effects produced by the drug.

In the treatment of auricular fibrillation, where digitalis achieves its best results, the evidence at hand seems to establish the fact that ventricular slowing is brought about by the dual action of digitalis on the cardio-inhibitory center and on the conduction pathway. Cases in which auricular fibrillation follows the so-called rheumatic infections in young or middle-aged persons as a rule show the most striking benefit from digitalis. The reduction or disappearance of a pulse deficit is mentioned as an important guide for the proper dosage of the drug. The evidences of heart block or of pulsus bigeminus occurring during digitalization should be taken as immediate signs for discontinuance of the drug. Thorough digitalization of patients with auricular flutter is considered to be a valuable procedure. Premature contractions are largely disregarded except when they occur during the administration of the drug. In paroxysmal tachycardia digitalis has been proved to be of no value. In partial heart block digitalis is contraindicated. Complete heart block, however, is not a contraindication and the drug may be of value in this condition. "In myocardial insufficiency," to quote, "it is evident that digitalis is of definate value, especially where edema is present." The manner in which the drug acts in such cases is still a matter of uncertainty. Regarding the treatment of pulsus alternans there is a difference of opinion and it "would seem that in many of these cases the margin between no therapeutic effect and a serious toxic effect is a very narrow one."

In discussing valvular heart disease Robinson states that in determining the indications for the use of digitalis, valvular lesions as such should be ignored, and other evidences of cardiac disorder should always serve as the guides for use of the drug. Aortic insufficiency is not a contraindication. In mitral stenosis without arrhythmia, the mechanical condition may be benefited, as suggested by Cohn and Fraser. As to the disturbances of the nervous mechanism of the heart Robinson emphatically states that whenever the diagnosis can be established with certainty it should be considered unwise to use digitalis in the cardiac neuroses with any expectation of obtaining beneficial results.

The use of digitalis in acute infections needs further observation. The evidence at hand, however, especially in cases of pneumonia, shows that the action of the drug is the same as in non-febrile conditions. It is probably of little or no value. In diphtheria there seems to be a distinct contraindication to the use of digitalis, on account of the close resemblance between the effect on the heart of diphtheria toxin and of digitalis.

In discussing the proper dosage of the digitalis bodies Robinson points out the wide ranges in the doses recommended by various authorities. He emphasizes particularly the necessity of regulating the dose of the drug by its action, and quotes Withering, the first to recognize and publish an account of the action of digitalis. Withering's advice in 1875 for the use of the drug, though frequently disregarded, is still sound. He said: "Let the medicine be continued until it either acts on the kidneys, the stomach, the pulse or the bowels; let it be stopped on the first appearance of any one of these effects." Various attempts to establish the dose of digitalis for man are described, and the work of Eggleston is mentioned in particular. Eggleston's method of administering the drug in massive doses where rapid action is desired are given

in detail, with a clear warning of the danger of this method "if digitalis has recently been given in any form or by any route." The total dosage for a single or combined massive dose in adults is calculated and Pardee's rule of giving one minim of the tincture for each pound of body weight, in a single dose, is mentioned as a logical and safe proceeding. The necessity of knowing the strength in biological units of the preparation is emphasized. The work of McCulloth and Rupe on children indicates the necessity of employing about 50% more of the drug per pound of body weight than in adults.

The question of the absorption of the digitalis bodies is discussed in full. According to Eggleston "digitalis alone is well absorbed from the alimentary tract of man. Strophanthus, convallaria, squills, etc., are alike poorly absorbed and irregularly absorbed." Strophanthus is especially mentioned as a drug that "should never be used for oral administration to man on account of the danger of serious accident." The tincture of digitalis is better absorbed than digitoxin, digitalin and digitalein. Evidence for any important destructive action on any of the digitalis glucosides following their therapeutic administration by mouth seems to be lacking. The size of the dose of digitalis when administered by mouth, rather than the delay in the absorption of the action of the drug, is the most important factor in regulating the speed of action of the drug. Intravenous administration is rarely necessary. When such a method is indicated strophanthin had best be used. Subcutaneous and intramuscular injections are dismissed as being undesirable and of no advantage over other methods. Rectal administration is mentioned as a possibility in selected cases.

The use of the term "cumulative action" of digitalis is criticized as tending to perpetuate a misconception. That the action of digitalis persists for some time after administration is recognized, although the various bodies differ in this. The point is made that "every digitalin is a synergist of every other member of the group."

As regards the elimination of the drug, Pardee's average figure of 22 minims per day seems to afford a fairly satisfactory basis for continued medication.

Finally in discussing the various preparations of digitalis and its allies the following statements are of interest. "Of the many preparations and specialties which are offered with high claims for oral administration, none is superior to the powdered leaf, or a tincture of high grade, and most are *decidedly* inferior," "The infusion has no advantage over the tincture or powdered leaves," "None of the preparations claiming to be devoid of effects on the gastrointestinal tract should be used on that account. The absence of this effect must be viewed as evidence of inactivity, because of lack of potency or poor absorption, and if gastric symptoms are not produced the desirable effect cannot be expected." Crystalline strophanthin is the most satisfactory drug for intravenous use, provided it is protected against deterioration by regulation of its reaction, and by its being marketed in hard glass containers. Squill apocynum and convallania as shown by White and his collaborators, have "no place in the rational treatment of heart failure." In conclusion Robinson states that "the selection of the form in which the drug is used is relatively unimportant if activity, and expecially dosage, are controlled, and if the use of unsuitable members of the digitalis group are avoided."

The second article of this issue concerns itself with the treatment of meningococcus meningitis. After a brief résumé of the history of the disease and of the mortality existing before the discovery of specific therapy, Blackfan describes in detail the meningococcus and its strains and the discovery of a specific antimeningococcus serum. In discussing the diagnosis of this disease and the importance of bacteriological proof in individual cases he points out the difficulty of demonstrating the meningococci in subacute and chronic cases. This is also true in the presence of a block existing between the ventricles and the spinal sub-arachnoid space. An important point is made that cases do occur in which meningococci cannot be demonstrated in smears or by cultivation, but which do recover under specific therapy.

Prophylactic measures are discussed at length, with especial reference to the carrier problem. The high incidence of carriers is emphasized, and the necessity of isolation of such individuals whenever possible. Local treatment of the rhino-pharynx of such individuals seems to be of no value. Passive and active immunity for prophylactic measures are considered. The evidence at hand would seem to favor prophylactic meningococcus vaccination in epidemics.

It is of interest in considering the epidemiology of the disease to note the author's statement "that the majority of observers are of the opinion that the meningococcus gains access to the blood stream through the upper air passages and then becomes localized in the meninges."

The remainder of the article deals mainly with the details of the specific treatment of the disease. Lumbar puncture as a means of diagnosis is strongly advocated in spite of any theoretical dangers attributable to its use. The intravenous administration of serum is the method of choice. The serum should be given by the gravity method and special attention should be paid to symptoms of collapse. It is essential that the serum should be of high potency, and certain antibodies specific for the causative type of organism: that it be maintained within the cerebrospinal system at high concentration, and in direct contact with the meningococcus. Free drainage should be obtained from time to time by spinal puncture. The symptoms accompanying the intraspinous injection of the serum are outlined and more especially those connected with too rapid injection and the sudden increase of intracranial pressure.

The dosage and frequency of injection and the indication for the discontinuance of intravenous treatment are fully considered. The early intraventricular injection of serum in small infants and in patients with a thick plastic exudate, with or without hydrocephalus is recommended. For general use polyvalent sera are desirable. Drugs, except for the relief of symptoms, have proved valueless. Other measures such as venesection, the intraspinous injection of human serum and antiseptics, salt injections, the use of lumbar puncture alone are all considered and dismissed as unsatisfactory. In subacute and chronic cases the use of vaccines would seem to be indicated as worthy of trial.

Hydrocephalus, as a complication of the disease, is discussed fully, and the necessity of intraventricular treatment is clearly pointed out. In chronic cases with obstructive hydrocephalus, early surgical interference is indicated. Other complications and sequelae of the disease and their treatment are discussed Serum sickness and the subject of anaphylaxis are briefly considered.

The favorable influence of serum therapy upon the disease is clearly outlined in a brief series of statistics of cases, taken before and after the discovery of specific serum. The present mortality is about 25% as compared with the mortality of 70% some 15 years ago.

In conclusion Blackfan emphasizes the great importance of the potency of the serum employed and declares that "experience has demonstrated that the commercial manufacturer cannot be permitted to determine the method of preparation and choose his own standard of potency."

POSTTRANSFUSION REACTIONS.

LEVINE and SEGALL (*Surg., Gyn. and Obstet.*, Sept., 1922) write as follows:

The compatibility of the recipient's and donor's bloods must be determined prior to each and every transfusion.

No transfusion must be done during or within 24 hours after prolonged ether anesthesia, even when the donor has been found suitable previous to the beginning of anesthesia.

Much depends upon the accuracy of the test. It is, therefore, preferable to do both the indirect test (Moss, 28) to determnie the group of donor and recipient, and also the direct (Cocoa, 9) test, to corroborate the compatibility of the bloods, thus checking up one test by the other.

In a very recent article Robertson and Rous (39) conclude that in cases of repeated transfusion it is necessary to test for autoagglutination in the recipient's blood, and also point out that serum separated at 37 degrees C. contains more agglutinins than that separated at room temperature, whereas agglutination is more marked at room temperature than at 37 degrees C.

[E. H. R.]

The Therapeutics of Emetine.

Chopra and Ghosh (*Ind. Med. Gaz.*, July, 1922) present a valuable paper from the pharmacological laboratory of the Calcutta School of Tropical Medicine on the therapeutics of emetine. They emphasize the fact that emetine is a very powerful drug, having a toxic and cumulative action. Its value has been fully established in amoebiasis, but the administration of the drug demands most careful consideration. The patient should be kept in bed, carefully dieted, and the pulse rate watched. The drug must be stopped on the appearance of any toxic symptoms. Convalescents who have undergone a course of emetine should be allowed up gradually, and if there is any increase in the pulse rate, sent back to bed.

One grain subcutaneously every day for 12 days will cure most cases, but a maximum of 15 grains may be given. Some physicians give half a grain by mouth in addition, making a total of 18 grains. Larger doses than this in a single course are not advised. If amoebic cysts are found after treatment the course should be repeated, but, if possible, not within one month.

Emetine-bismuth-iodide is given in three-grain doses for 12 successive days.

[L. D. C.]

A Symposium on Cancer and Its Treatment.

Annals of Surgery, September, 1922, contains thirteen articles on this general subject and brings the subject of the treatment of carcinoma in certain regions well up to date.

Mayo shows how the end-results in cancer are influenced by type, reaction, location, and age. He states that the views of most investigators seem to harmonize in accepting the regression or degeneration of the cells, of loss of function, and of proliferation, as the processes in cancer, together with that of chronic irritation, which are most liable to be factors in its onset. The action of x-ray on carcinoma causes a complex, physio-chemical change in which the cell becomes edematous, the nuclear substance fragments, and finally all powers of cell regeneration are lost; the débris is carried away by phagocytosis and replaced by connective tissue.

Eliot makes the following statement in regard to recurrence versus metastasis:

"Careful consideration of the clinical features of the cases herewith reported fails to disclose any positive etiological relationship between the primary growth and those that developed secondarily. That carcinoma shares with many varieties of benign tumors the clinical manifestation of independent multiplicity cannot be advanced. There is no reason, however, why more than one glandular organ should not be exposed to the exciting cause of carcinoma, whatever that may be, either at about the same time or many years after the successful removal of the initial growth. This is certainly true of persistent and long-continued mechanical or other form of irritation which is recognized as the most important predisposing etiological factor in this justly dreaded lesion.

"If, for the sake of argument, the possibility of the independent development of two or more carcinomatous foci is granted, the wisdom of the thorough excision of each focus cannot be gainsaid. While metastasis ordinarily contra-indicates surgical interference, analysis of the majority of cases herewith cited leads to the conclusion that a wide excision of carcinomatous foci without evident interdependence yields encouraging results, and the propriety of adopting such a surgical principle will, I believe, be concurred in by all."

Ochsner finds in cancer of the jaw that the destruction of the growth with the actual cautery seems to give better chances of permanent cure than excision with the knife. He is convinced that early and very extensive operation with the cautery followed by carefully planned after-treatment with x-ray or radium is quite worth while in these cases, and that occasionally even advanced cases will be permanently cured by this method.

The following conclusions are drawn by Lower regarding carcinoma of the bladder:

"A large percentage of the malignant cases are of papillary origin, which means that they were referred late to the surgeon.

"The percentage of recurrence is great whatever the method of operation, whether excision or cauterization.

"Recurrence is no contra-indication for treatment, as some of the best results have resulted from operation on cases with recurrences.

"Repeated observation after operation is absolutely essential if the mortality of carcinoma of the bladder is to be reduced.

"The good results of the treatment of recurrences are due to the fact that recurrences are nearly always local and very seldom metastasize."

Lee makes the following statement regarding the radiation of carcinoma of the breast:

"Primary inoperable carcinoma of the breast has shown good results by radiation.

"The patient must be kept under constant clinical observation.

"The type of radiation must be properly selected for each individual case. No routine prescription will suffice.

"Over-treatment by radiation must be avoided.

"Very advanced cases are unsuitable for any form of treatment.

"The palliative operation following properly planned radiation is of service in well-selected cases.

"A coöperating Social Service Department makes a follow-up system effective and gives humanitarian relief to the hopeless cases.

"The results to date are very gratifying and encouraging. As the disease itself and the technic of radiation becomes better understood, we believe that more and more satisfactory results will follow, and that the possibility of still further control of the disease by radiation may ultimately be realized."

Jones and McKittrick present a very well-stated and analyzed article on carcinoma of the rectum, and describe in detail the type of operation fitted to the various types of carcinoma in patients in varying conditions of health.

Davis analyzes the results in carcinoma of the cervix and stands firmly for the use of pan-hysterectomy as opposed to radium in early cases of this disease.

[E. H. R.]

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THE NEW STATE HOSPITAL FOR MINOR WARDS.

The opening of this new hospital at Canton is an event of more than local interest as it marks progress in the remarkable work of the commonwealth of Massachusetts in its care of the afflicted and neglected children, a work in which Massachusetts has always been preëminent and a leader. The minor wards in our Commonwealth have for many years been placed under careful supervision, not grouped in large institutions but in carefully selected private homes; but diseases incidental to childhood necessarily occur in the several thousand minor wards placed in families throughout the State. These children have been taken, when ill, to local private hospitals or placed under the care of physicians of the vicinity or in many instances sent to the State Infirmary, already overcrowded with the care of adults. For many years it has been thought desirable to establish separate provisions for this group of children. After the proper legislation for the purpose, steps were taken for the erection of a hospital for sick minor wards at Canton, under the direction of the State Department of Public Welfare, and the immediate supervision of the trustees of the Hospital School for the care of crippled children. The excellent record of this latter institution in the treatment, cure and education of crippled children, with marked economy in administration and in effort, seemed to justify the action of the legislature.

The trustees of the State Hospital School for crippled children hesitated in assuming the additional responsibility of the care of sick minor wards, as they were unwilling to impair the excellence of their work in the education of the physically handicapped. It was, therefore, stipulated that the two divisions of work should be sharply separated, although for economy of administration, association in the direction of the two institutions might be desirable. It is with this understanding that a new hospital has been built under the direction of the superintendent of and in close vicinity to the school for crippled children. It is unnecessary to refer here to the remarkable work already done at Canton in the education and surgical and medical care of those children afflicted with orthopedic diseases, but reference should be made to the equally unusual work in providing an efficient method of ventilation which secures for the tuberculous and slum crowded children absolutely fresh air at all times. In almost all of our schools and hospitals the need of fresh air is either entirely disregarded or made imperfectly in a way satisfactory to the plans of the sanitary engineer but entirely inadequate to the physician. This fact can be determined by anyone visiting the wards of any hospital in the winter in the early hours of the morning or late at night from one to three, or in visiting our public schools at the hours of crowded activity. The theory of ventilation, which has seemed satisfactory to the sanitary engineer, is based on the plan of plenum or exhaust method of removing carbon dioxide. The complete inadequacy of this method needs no description, as it is demonstrable in practical experiences.

The trustees of the Canton State Hospital School were fully aware of the need of furnishing fresh air to the children placed under their care and they erected buildings furnished with direct roof ventilation except in a few school rooms where they were obliged by the State laws governing school rooms to use an indirect system. As by smoke experiments the latter method was shown to be absolutely imperfect, open air school was provided. The result proved in the many years' experience of the school, the wisdom of the plan of the trustees of the institution. Adenoids, tonsils, threatening disastrous results have returned to normal and no operative interference has been necessary. In the twelve years' work at the school there has been a marked absence of respiratory diseases and a notable freedom from contagious diseases, although exposure from the visits of parents and the entrance of new patients was unavoidable. The general health of the children, their activity and development in energy as well as ruddy appearance was remarkable. It is for this reason that in planning the new hospital the trustees

stipulated that in their opinion it was essential that the building should not be constructed according to the ordinary lines of hospital construction with flat ceilings and corners impossible of adequate ventilations by the indirect method. The experience obtained in the erection of several buildings, both of one and two stories, enabled the trustees to construct a building to house at once a hundred patients at a minimum cost but of maximum efficiency with necessary laboratories completely equipped to furnish fresh air night and day in all weathers without exposure of the patients and without reliance upon balconies not always practical in the worst weather. To all patients placed in the institution the efficacy of the plan of ventilation is without question, as can be seen in several of the buildings already erected, but the plan is more thoroughly carried out in the new institution and the ventilation has been tested before the occupancy of the hospital by thorough smoke tests. There is in the institution also excellence in planning for economy of administration and in the presentation of well lighted, attractive rooms and corridors.

THE NEW ENGLAND TUBERCULOSIS CONFERENCE AT AUGUSTA, ME.

The conference opened Thursday, September 28th, in the morning, with addresses of welcome by Maine officials and health administrators with appropriate responses from Massachusetts, Canada and National Tuberculosis Association representatives.

At the meeting of the Medical Section on Thursday afternoon, heliotherapy was the striking subject. Dr. Harry Lee Barnes, Superintendent of the Rhode Island State Sanatorium, presented a study of the apical changes of the lung based on a study of 1,111 patients at his institution. Dr. Hugh B. Campbell, Superintendent of the Norwich State Sanatorium, and Dr. Edward J. Lynch, Superintendent of the Shelton State Sanatorium, Connecticut, continued the discussion on x-ray diagnosis, agreeing that it should not be used independently, but is of great value when employed in coöperation with other means. The emphasis of the session was laid on the success of heliotherapy, not only for bone and glandular tuberculosis in children, but for the pulmonary forms also. The speakers were Dr. Cole B. Gibson of the Meriden State Tuberculosis Sanatorium and Dr. John F. O'Brien, Superintendent of the Seaside Sanatorium at Niantic, Connecticut. The general claims of these speakers were that all forms of disease yield to the sun cure. Pure sunlight instead of sunlight through windows is demanded. Exposure of the bodies of the patients to out-door conditions even in the coldest weather causes no discomfort if the patients are properly accustomed to the change. It was asserted that the intense suffering of children ill with bone tuberculosis stops quickly under heliotherapy. Surgical operations are considered unwise by these speakers for the treatment of diseased glands, and it was asserted that the removal of tonsils and adenoids instead of being beneficial led to aggravation of the symptoms.

At the same time the Nursing Section had a meeting, at which Miss Hazel Wedgewood of the American Child Hygiene Association, Washington, discussed the "Standardization of Public Health Training." She emphasized the need of a definition of public health nurse and in supplying this definition stated that she should be a graduate hospital nurse, of at least two years' training, doing any form of public work in which her training as a nurse is useful. The nurse should have a knowledge of normal health, orthopedics, mental hygiene and the causes of mal-adjustment. She should be able to recognize the early cardinal symptoms of communicable diseases. She should keep herself in good health and have clerical ability.

Miss Edith L. Soule, State Supervising Nurse of the Maine State Department of Health, set forth the "Essentials for Standardization" under a number of headings: special training in public health nursing; study of local, county, state and national health programs; close coöperation with county and state medical associations; standing rules and standard technique; careful supervision; accurate record keeping, and frequent group conferences of nurses and supervisors.

Miss Mary E. Edgecombe of the Providence District Nursing Association spoke on the "Relations of the Nurse in the Home," and spoke especially on the duties of the tuberculosis nurse.

Thursday evening the first speaker was Dr. Edward O. Otis, President of the Massachusetts Tuberculosis League, who outlined the place of the National Tuberculosis Association, speaking of the recent International Tuberculosis Congress in Washington and the work of the N. T. A. in developing ways and means for fighting the disease. Rapid diminution in tuberculosis has been noteworthy since the initiation of organized effort against it, but in the opinion of the speaker there will be a minimum of the disease so long as human nature is what it is and people are neglectful of its beginnings. He emphasized the need of protecting the health of children so that in later life they may not develop tuberculosis, and approved the present methods of surveys and the advantage of coördinating health agencies for the eradication of tuberculosis.

Dr. B. L. Bryant, Secretary of the Maine Medical Association, outlined the work of his organization, which has established an advisory health committee of the three state-wide organizations,—the State Department of Health, the Maine Medical Association, and the Maine Pub-

lic Health Association. An effort is under way to secure similar federations of county activities. Work along lines of periodic examinations is advocated, and effort is made to secure coöperation and support of public health nurses, and the plans contemplate a public relations committee as a clearing house for the various medical groups. Maine hopes through these measures to establish a harmonious self-supporting health unit in every community in the state.

There was a discussion on the question, "Should there be a consolidation of all voluntary health agencies?" with Dr. E. T. Merrill, President of the Maine Public Health Association in the affirmative, and Mr. Hubert M. Sedgwick, Secretary of the Connecticut Tuberculosis Commission, in the negative. Dr. Merrill's summary is that the voluntary health workers should be united in one organization with one staff, one office expense, one appeal for funds, and at the same time refer through definite committees the specialized interests of the different movements, such as the campaign against tuberculosis, against cancer, the control of social diseases, infant welfare, prevention of blindness, etc. Mr. Sedgwick feels that the "health trust" weakens the individual campaign against a disease by failing to focus the local units upon it. His attitude was not that of discouraging coördination, but combating the idea of a public health association as a cure-all for the organization weakness.

On Friday there were six meetings of sections together with meetings of affiliated associations, and in the evening a social diversion. At the meeting of the Medical Section, Dr. J. Perkins, President of the Providence Tuberculosis League, discussed "The Diagnosis of Tuberculosis," bringing out the point that the diagnosis of tuberculosis is not a science, but an art. Dr. Estes Nichols of Portland, late Lieutenant Colonel, M. C., U. S. A., spoke on occupational therapeutics for tuberculosis, illustrating his talk with stereopticon views. He emphasized the point that occupational therapeutics will bring comfort and happiness, and strengthen morale of the patient.

Dr. D. C. Jarvis of Barre, Vt., presented a paper on dust inhalation, carrying further the researches that have already been published.

At the meeting of the section for secretaries and nurses, the procedure in all the New England States was set forth by someone connected with the State Board of Health.

At the meeting of the Sanatorium Section, Dr. Henry D. Chadwick, Superintendent of the Westfield State Sanatorium, spoke on "Tuberculosis of Children." He called attention to the fact that the infantile form of tuberculosis usually results fatally where the infection occurs before the age of two years. From this point on there is a steadily increasing immunity. After the age of five the juvenile form of tuberculosis largely predominates. This he characterized as "a golden interval of low mortality" between the infantile form and the adult form. The adult type of tuberculosis rarely develops before the age of twelve. His paper discussed the points on which the diagnosis of the various kinds of tuberculosis, especially the juvenile, should be based.

Dr. Thomas A. Foster of the Children's Hospital at Portland emphasized the need of special wards to care for children with tuberculosis of the bone. It is generally possible to effect a cure of a child with this form of disease if he can be kept long enough under proper supervision.

One of the afternoon sessions on Friday was devoted to the Christmas Seal Sale, with Mr. Basil G. Eaves, Campaign Secretary of the National Tuberculosis Association, chairman.

The concurrent session was that of the health officers, with Dr. Eugene R. Kelley in the chair, at which Dr. Charles Dalton, Secretary of the State Board of Health of Vermont, spoke on the relation of the voluntary health worker to the state and local health officer; Dr. Thomas Tetreau of Portland, on the enforcement of health laws, and Dr. Howard A. Streeter, Health Officer of Manchester, New Hampshire, spoke on the question of politics and the health officer.

In the evening the great social event of the meeting took place in the State House in the form of a husking bee.

Saturday morning was devoted to two general topics—general consideration of health, by three speakers, and the discussion of rest cure in the home treatment of tuberculosis by Dr. S. Adolphus Knopf of New York. The concluding exercise was a Modern Health Crusade luncheon at the Augusta House on Saturday noon.

THE MASSACHUSETTS MEDICO-LEGAL SOCIETY.

This society has been in existence 45 years, it meets every four months, on the same date and in the same place as the Council of the Massachusetts Medical Society. Its active membership consists of the Medical Examiners and Associate Medical Examiners of the State, with honorary membership of experts in various branches of legal medicine, members of the medical or legal profession who have contributed to the advancement of legal medicine, and retired active members.

The Society was founded in 1877 and in earlier years its work was fostered and largely contributed to by the revered Professors, Edward S. Wood, F. D. Draper and Wm. F. Whitney, and many men of ability who served in various sections of the state.

In absence of any central controlling body the Medical Examiners have found the Society to be the only means whereby anything approaching uniformity of procedure in the various districts could be attained and it has rendered a notable service to the Commonwealth by bringing the Examiners of the remotest districts into intimate contact with those of the Metropolitan areas and with the best teachers of legal medicine.

The Massachusetts law places very large discretionary powers upon those medical men whom she honors by appointment to the office of Medical Examiner and it can be fairly claimed that those powers have never been abused. Moreover, the medical investigations by expert men, often independent of and preceding, or, in cases of death from obvious unnatural cause, always supplementing those of the regular police, have been of undoubted utility in the detection of crime and convicting of the criminals. Such investigations at present play an important part in industrial accidents, accidents on the highways and railroads, deaths from alcohol, drugs or vocational poisonings, in most of which there is no criminal liability, but in which the victims are covered by various forms of insurance.

At the recent meeting—Wednesday, Oct. 4th—a subject of very great moment to the medical profession in general was considered—namely "The Medical Examiner's Duty in Relation to Surgical Deaths." The problem, as Medical Examiners face it, was stated by Dr. Hunt (11th Worcester) to hinge upon the interpretation of that portion of Section 38 (General Laws) which provides "if upon such view, personal inquiry or autopsy the Medical Examiner is of the opinion that the death may have been caused by the act or negligence of another, he shall at once notify——a justice——. The court or trial justice shall thereupon hold an inquest." It was pointed out that this phraseology was adopted in 1916 in an effort to reduce the number of inquests on cases of simple accidents, suicides, etc., but the possibility of bringing surgical deaths into the class for which inquests were necessary was probably overlooked. As instances which might come to a Medical Examiner's attention, a case of death resulting from gastro-enterostomy by an eminent surgeon in which the anastomosis was made to the large intestine instead of to the jejunum, and a case where an inexperienced operator in attempting to do a vaginal hysterectomy opened the bladder, and then proceeded to complete the operation by the abdominal route with the result that the patient died of peritonitis, were quoted from a book by Norman Barnesby. Hon. E. P. Saltonstall, District Attorney for Middlesex County and Legal Advisor to the Massachusetts Medical Society, was present as guest, and the question as to the application of the clause quoted was referred to him. He said in part—"the mere fact that a death was caused by the negligent act of another isn't sufficient to make it a crime, but as to reporting it the statute does not make any such distinction. It reads 'by the act *or* negligence.' If you think the death was caused by the act, whether it was negligent or not, or if death results from injury caused by negligence of another, I think you are taking great chances if you don't report every such case. It is your duty to do it." Specifically referring to the two cases cited he said, "it would be your duty to report such a case as that. I don't know enough about surgery to know whether removing the womb through the vagina was a reckless thing to do. The first case was mere negligence; but if a man wilfully does somthing which common sense should have told him he didn't have the experience to do, I should think such a case should be reported.

"Your President introduced me as Medical Advisor of the Massachusetts Medical Society. I have not tried many cases yet, but one of the difficulties I have to overcome is the prevailing thought in the minds of the jurors that all doctors stand together, and that they are willing to go to great lengths to protect each other in suits arising from acts of carelessness, oversight or bad judgment. Now anything that you gentlemen do to encourage that prevailing opinion is going to make it harder and harder to overcome, and it is going to make it harder and harder to bring these cases into court. They have been increasing. I think anything that doctors do that is not absolutely above board, if they are not laying their cards on the table, is encouraging that feeling. I think the law requires that where we find death has been caused by a mistake—certainly by negligence—and I would almost go so far as to say a serious mistake of judgment—that such a death should be reported to the district attorney and a justice of the court or trial justice in the usual way."

The discussion was participated in by several Medical Examiners. Some expressed the opinion that the intent of the law did not contemplate inquests on such cases. Dr. G. B. Magrath said that since the passage of the law it had been his practice in Suffolk district to report such cases, the Medical Examiner's function being to ascertain the medical facts and form an opinion on them and the story of the case as he obtains it from inquiry. He then informs the justice, whose responsibility it is to decide whether there be criminal act or negligence. An inquest may, at the discretion of the judge, be strictly private.

This opens up interesting possibilities for control of the practice of surgery by an agency outside of the Board of Registration in Medicine. While its strict application might occasionally prove embarrassing, should it become a recognized fact that a judicial inquest would

follow every death resulting directly from a mischance of operation or anesthesia, it might well prove a valuable restraining influence upon inexpert or injudicious use of surgery.

Another feature of the Meeting was a valuable paper by Mr. Chester H. Clark from the Internal Revenue Service upon Drug Addiction in Massachusetts and its Medico-legal Relation. This paper will later be published in detail in this Journal or in the Proceedings of the Society.

AMERICAN COLLEGE OF SURGEONS OCT. 23-27.

Boston hospitals and Boston surgeons are doing and showing their best for the annual meeting of the College with its distinguished foreign guests and the two thousand Fellows assembled.

No doubt the meeting is by way of being a success—so much has been promised in the program.

Perhaps a word may be in place here and now, to speak more at length of the College and its aims and what it has done in its nine short years of existence.

Because American Surgery, vigorous, vital, mostly fine, yet stood in need of standards more nearly fixed, because there was need of a body to represent its ideals, the American College came into being.

It was conceived in the first instance as a means of raising the standard of surgery by setting and raising the standard qualifications of surgeons.

Beginning with the original committee of ten, then with the 450 "founders"—men of acknowledged standing and character, increased by careful picking of other established surgeons, chosen by state committees as measuring up to set standards of training, skill, experience and decency, now growing by additions in the last few years from the younger men, younger Fellows, chosen for all that marked the older ones, but tested also by careful examination. So founded and enlarged, the college includes 4000 surgeons and practitioners of the surgical specialities, and stands as the acknowledged surgical body of the United States and Canada.

That part of the work is well on the way in the face of opposition expected and met and needs but a continuance of careful recruiting with standards slowly and steadily trending upward.

There was a serious evil in the "fee-splitting" so prevalent in some states that it menaced the work of the College. The practice had been frowned on from the start, forbidden by the College's fellowship pledge, and never got any foothold in its ranks. But so general was the practice in some states that it was hard for the Fellows to keep going and keep clean.

The College took up this matter and scores of meetings—doctors' meetings, meetings of hospital trustees, public meetings—were part of an educational campaign in many places in many states, mostly conducted, and very ably conducted, by Mr. John G. Bowman, then Director for the College.

No one pretends that fee-splitting is dead but it is at least less deadly.

Because hospitals needed standards no less than the men who served them the College got the American Hospital Association to join in a campaign.

Resultant, a campaign now six years old, that has had no fanfare of publicity, that has coerced no one, that has, none the less, brought hospital standards to a definitely higher grade.

Today we all have records, pre- and post-operative diagnoses and all the rest.

They are a nuisance we all feel at times, but goodness knows they have been a blessing in disguise. Daily we sputter, and read, and sign, and then sometimes think how casual we all used to be.

We have laboratories, x-ray plants and men to run them far more generally than before this campaign set standards.

Best of all, everywhere in the country now are the stated monthly staff meetings dedicated to free discussion of hospital problems. Six years ago such meetings were held by few hospitals. Nothing has been more helpful than this simple innovation in promoting coöperation and efficiency.

Hospitals already half standardized and in order, and the work progressing,—what next?

Next comes surgical teaching and training with much to be done and changed.

The schools are doing their best with undergraduate training and one wonders sometimes if they are not doing too much; at all events they are not the immediate concern of the College.

It is the graduate training, the training of a decade and more after medical school and hospital interneship that concerns us most.

Has not our teaching carried out by the written word and the open clinic contained a bit more propaganda, a bit less sound surgery than it should?

It is not long since that Codman, talking ceaselessly of end-results, was as one crying in the wilderness.

This year we are again pledged to report for publication a year later all the end-results of cases operated on before the visiting surgeons.

That is an excellent plan but it is not all.

The emphasis in the actual presentation of clinics this year has come to be not on the operative clinic but on the "dry" clinic: we are stressing not surgical technic but surgical results—for the dry clinics mean only this,—that the surgeon shows what he has done, and finished, and tells withal what he has learned and is ready to pass on to his Fellows, with demon-

strated reasons why they should receive it, or why not.

Surgery up to a few decades ago was the exhibition of the marvellous technical skill of the master.

It was in a way a show.

Times have changed.

The surgeon today, not less skillful, recognizes that the logical thing to present is *not a surgical show but a surgical "show-down."*

That he is ready to do this represents a changed sense of values which the College has had no little share in promoting.

NEWS ITEMS

Death Rate in Boston.—During the week ending Oct. 14, 1922, the number of deaths reported was 192, against 188 last year, with a rate of 13.11. There were 37 deaths under one year of age, against 22 last year. The number of cases of principal reportable diseases were: Diphtheria, 83; Scarlet Fever, 24; Measles, 37; Whooping Cough, 50; Typhoid Fever, 4; Tuberculosis, 33. Included in the above, were the following cases of non-residents: Diphtheria, 21; Scarlet Fever, 4; Typhoid Fever, 1; Tuberculosis, 4. Total deaths from these diseases were: Diphtheria, 2; Scarlet Fever, 1; Whooping Cough, 2; Typhoid Fever, 1; Tuberculosis, 14. Included in the above, were the following cases of non-residents: Diphtheria, 2; Typhoid Fever, 1; Tuberculosis, 1.

The One Hundredth Anniversary of the Birth of Pasteur.—The New York Academy of Medicine has organized a celebration of the 100th anniversary of the birth of the late Louis Pasteur, which is to consist of a public exhibition, in the building of the Academy, commencing on December 27, 1922, the anniversary date, and culminating at the end of a fortnight in an evening of public addresses by distinguished members of the medical profession. The exhibition will consist of a collection of Pasteur memorabilia, such as books, manuscripts, photographs, engravings, medals, etc., illustrating the life work of Pasteur.

The Annual Meeting of the Cambridge Anti-Tuberculosis Association was held Oct. 10 at the Phillips Brooks House. The report of the year's work was read by the Executive Secretary, Mrs. Mabel Greeley Smith, and of the East Cambridge Health Center by Mrs. J. G. Thorp. The chief activities reported upon were: Coöperation with the Cambridge School Committee in the support of two summer day camps for undernourished children with an attendance of 312. Nutrition work in public and parochial schools. The beginning of Occupational Therapy at the Cambridge Tuberculosis Hospital. Health Center in the foreign section of the city. Educational work.

Officers Elected for 1922-1923: President, Eugene A. Darling, M.D.; *Vice Presidents,* Mrs. Rufus P. Williams, Edward A. Andrews; *Secretary,* Miss Louise W. Jackson; *Treasurer,* Miss Eva H. Bowe, Harvard Trust Company, Harvard Square.

Board of Managers: Rev. James T. Addison, Sumner C. Andrews, M.D., Rev. Hugh F. Blunt, Mrs. Raymond Calkins, Miss Bernice W. Cannon, Merrill E. Champion, M.D., Mrs. Leslie L. Cleveland, Hiram W. Colton, Bronson Crothers, M.D., Arthur Drinkwater, M. E. Fitzgerald, Rabbi Aaron Gorovitz, Thomas Hadley, Rev. Frank O. Holmes, Mrs. Edward Ingraham, Harry W. Joel, Mrs. Oliver D. Kellogg, Mrs. Kirsopp Lake, Mrs. Herbert Langfeld, Roger I. Lee, M.D., Felix McGirr, M.D., Miss Penelope B. Noyes, Mrs. J. Arnold Rockwell, Mrs. Charles R. Sanger, Mrs. Winthrop Slade, John J. Smith, M.D., John H. Taylor, M.D., Mrs. Joseph G. Thorp, Mrs. Charles P. Vosburgh, Joseph M. Wadden, M.D., George C. Whipple.

Plymouth District Medical Society.—The regular quarterly meeting was held Thursday, October 19th, at 11 o'clock, at the Brockton Hospital. There was an opportunity to inspect the hospital. At 10 o'clock there were Surgical, Medical and X-ray Clinics. Speaker: Dr. Lesley H. Spooner, of Boston; subject: "The Specific Diagnosis and Treatment of Lobar Pneumonia."

Beverly Hospital.—A demonstration clinical meeting was held at the Beverly Hospital Tuesday, October 17, 1922, at 4 P. M. Interesting cases were shown and discussion followed.

Registration of Nurses.—Two hundred and ninety-seven graduate nurses were present during the October examinations conducted by the Board of Registration of Nurses.

The Regular Meeting of the Springfield Academy of Medicine was held Tuesday, October 10, at 137½ State Street, at 8:30 P. M. Dr. Wyman Whittemore of Boston read the paper of the evening, entitled "Some Surgical Diseases of the Chest."

Dinner to Dr. Faxon.—On October 11th a dinner was given at the St. Botolph Club to Dr. Nathaniel Faxon, who is about to leave his position as Assistant Administrator of the Massachusetts General Hospital in order to assume the duties of Director of the Strong Memorial Hospital in Rochester, New York. Dr. Faxon will have oversight of the building of the hospital, for which a provision of ten million dollars has been made. The Strong Memorial Hospital will be connected with the School of Medicine and Dentistry of the University of Rochester. The dinner was given to Dr. Faxon by his

friends at the Massachusetts General Hospital. There were many expressions of regret for the loss of his services here, and at the same time many congratulations because of the splendid opportunity which he will have in Rochester. A cigarette case was presented to Dr. Faxon by his friends as a token of their great appreciation of his work at the Massachusetts General Hospital and as an expression of their personal esteem.

Miscellany.

INFANT MORTALITY IN THE BIRTH REGISTRATION AREA OF THE UNITED STATES.

The Department of Commerce will soon issue a bulletin, based on 1921 figures compiled by the Bureau of the Census, showing for each State and each city in the birth registration area the number of births and the infant mortality rate, together with figures for 1920 for comparison. These 1921 figures for a population of 70,425,705 show 1,714,261 births, 825,511 deaths at all ages, and 129,588 deaths under 1 year of age, which give a birth rate of 24.3 per 1,000 population, a record low death rate of 11.7 per 1,000 population, and a record for low infant mortality rate of 76. In 1920 the rates for the birth registration area were: Birth rate 23.7 per 1,000 population; death rate 13.1 per 1,000 population; and infant mortality rate 86.

For the State the lowest 1921 infant mortality rate (51) appears for Oregon, and the highest (98) for Delaware; for cities of 100,000 population or more the lowest infant mortality rate (50) appears for Portland, Oregon, and the highest (114) for Fall River, Mass.

1921 birth rates and infant mortality rates for cities of 100,000 population or more in Massachusetts:

	Birth Rate.	Deaths of Infants Under One Year of Age per 1,000 Births.
Boston, Mass.	25.6	77
Cambridge, Mass.	27.6	64
Fall River, Mass.	30.7	114
Lowell, Mass.	27.8	90
New Bedford, Mass.	29.2	95
Springfield, Mass.	25.0	72
Worcester, Mass.	26.2	77

INSTRUCTIVE DISTRICT NURSING ASSOCIATION.

MONTHLY HEALTH BULLETIN, OCTOBER, 1922.

September has, as usual, been a very quiet month, with less illness than at any other period of the year.

Two thousand two hundred and ninety-one new patients were admitted. A unique fact in connection with these new patients was that fully one-half of them were babies or pregnant or newly delivered women.

The unseasonable activity of bronchitis and pneumonia, which marked July and August, and which, with the absence of digestive diseases, have been the outstanding features of the season, continued during September, 41 cases of each being admitted. On the other hand there were fewer cases of all the other diseases.

Continuing the gratifying decrease of the last few months, there were only three new cases of typhoid fever, a big decline from the number admitted in September of last year. Measles dropped to the lowest point in months, twenty-nine cases, but whooping cough increased, twenty-eight cases, as compared with four of last September

The baby clinics showed an unusually good attendance.

A MODEL MEDICAL MEETING.

A program of the Second Annual Clinical Meeting of the doctors of central and western Alabama has been received. The subjects discussed embraced those which are especially useful to those physicians who are striving to give most efficient service.

Surgery, general medicine and public health problems were well covered.

Officers of medical societies who are responsible for details of meetings could use the information found in the program to advantage.

Alabama has certainly created a standard which could be adopted in a general New England meeting.

UNION DES FEMMES DE FRANCE.

This section of the French Red Cross has had a remarkable career. During the war, in addition to other activities, it is credited with the following achievements:

It maintained 400 hospitals with a total of 32,000 beds, and afforded in all 17,300,000 days maintenance. They organized the voluntary cooperation of 775 Red Cross doctors and of 20,000 nurses, of whom 1,000 were attached to nursing units in the Army Zone (administrative personnel not included).

Ten doctors and 55 nurses died at their posts; 310 were awarded the Croix de Guerre; 51 received the Legion of Honor, and 70 were awarded foreign decorations.

Four hundred and two U. F. F. nurses served with military hospitals in Morocco (Rabat, Casabianca, Meknes).

Nursing units with the army of the East, and in allied countries counted 90 nurses; 70 nurses went to Russia.

A hundred model ambulances were placed at the disposal of the Army Medical Service; 30,000 wounded were transported in the Paris district alone; a convoy of motor stretchers was in operation for a period of two months, and undertook the transport of 100 severely wounded men.

Station canteens undertook the despatch of parcels to soldiers at the front, and to prisoners of war throughout the duration of hostilities. In Paris alone, 165,000 parcels were dealt with. An information service was maintained for soldiers' families and relatives of prisoners of war. Soldiers on leave (French, Belgian, Serbian) were cared for, and warm clothing distributed.

OLD CATHERINE HOSPITAL.

THE following appeared as a communication in the *New York Times*, under date of Oct. 5, signed by John Haynes Holmes:

"In the city of Moscow, some two miles from the Kremlin, is a hospital which promises to be the scene of one of the most important and beneficent chapters in the history of American relief in Russia. This is the historic old Catherine Hospital, which had its beginnings in the reign of Catherine II. It was my happy fortune, this last summer, to visit this institution as a member of a committee of the American Medical Aid for Russia. The hospital had some 400 beds, with accommodations for 450 workers. In happier days it provided for a total population — patients, physicians, nurses, orderlies, servants, etc.—of more than 2,000 persons. The grounds are now rough and unkempt, and the buildings in disrepair, several of them mere ruins.

During the last year the American Medical Aid for Russia, organized under the direction of a group of American physicians, raised a fund sufficient to purchase a hospital equipment adequate for a first-class institution, which is being shipped to Russia as rapidly as possible. The society has sent in equipment and donations in kind approximately $60,000.

Under an agreement formulated between the Moscow health authorities and the society, the old Catherine Hospital is now being put in first-class repair by the Soviet authorities and placed in charge of the American Medical Aid for a period of one year. Having already equipped the hospital, the society agrees to provision both patients and staff, and maintain the institution as a modern hospital of the highest standard.

For this great work the sum of $200,000 is promptly needed. My colleagues and I are agreed that such an undertaking, initiated in the name at once of American science and beneficence, will make an irresistible appeal to our fellow-citizens, and enlist their generous support.

Local groups of the American Medical Aid for Russia are being organized in the great cities of the country for the raising of funds. The officers of the organization are Mrs. Henry Villard, Chairman; Arthur S. Leeds, Treasurer; Frances Witherspoon, Executive Secretary. The National Advisory Committee of scientific men includes such names as those of Dr. Charles H. Mayo, Dr. M. J. Rosenau, Dr. Lewellys F. Barker, Dr. Haven Emerson, Dr. Harvey Cushing, Dr. Morton Prince, Dr. M. W. Ireland, Dr. Joseph Goldberger, Dr. Walter B. Cannon, and Dr. Jacques Loeb. Individual contributions may be sent to the American Medical Aid for Russia, 103 Park Avenue, New York."

SUMMARY OF WEEKLY HEALTH INDEX.

Telegraphic returns from 64 cities, with a total population of twenty-eight millions, for the week ending September 30, indicate a mortality rate of 10.7 as against 10.6 for the corresponding week of last year. The highest rate (18.0) appears for Memphis, Tenn., and the lowest (5.0) for Youngstown, Ohio. The highest infant mortality rate (178) appears for New Bedford, Mass., and the lowest for Albany, N. Y., which reported no infant mortality.

THE DIPHTHERIA MENACE.

The daily papers report that the Schick test now being used by the Boston Health Department has demonstrated that forty-five per cent. of the children are possible victims of diphtheria, when treated with toxin-antitoxin. In order to carry on the work effectively more physicians and nurses will be assigned to this work under Dr. John A. Ceconi.

THE MOSQUITO PEST.

The papers have published an alleged statement of Professor George C. Whipple to the effect that it is possible by concerted action to eliminate the mosquito in the inhabited parts of this State. This is a public health measure of importance, for in addition to the annoyance of the mosquito, irritation, loss of sleep and physical poise may lower resistance and thereby make a person susceptible to infection.

VORONOFF'S WORK ON GLAND TRANSPLANTATIONS.

ACCORDING to the daily papers, the medical profession of France is antagonistic to Voronoff's methods. He claims that great benefits have resulted from the grafting of the glands of apes onto man.

His recent lecture was largely boycotted by physicians, but a large concourse, including many women, seemed very much interested in the methods employed and assertions m...

RELIEF FOR RUSSIAN SCIENTIFIC MEN.

THE "Friends of Russian Scientists," an organization sponsored by a hundred professors and social workers in and around Boston, for the purpose of raising contributions to be known as the Gorki Fund for the Relief of Russian Scientists, has just received the following letter from Maxim Gorki:

In reply to your letter let me make the following statement: "The House of Scientists" in Petrograd is a charitable organization for mutual benefit, founded by Petrograd professors. I have the honor to be its chairman. The full name of the organization is "Committee for the Betterment of the Condition of Scientists" (Kommissia Ulutschenia Bita Utschenich —abbreviated: KUBU). Address: C. Oldenburg, Member of the Academy, House of Scientists, 27 Millionaia, Petrograd.

The "House of Scientists" brings together all the scientific workers of Petrograd—there are about 3,000 of them, and together with their families they comprise about 12,000 souls. They are undergoing great privation. and are in particular need of sugar, flour and fats.

Most of the scientists are men of middle or advanced age, enfeebled by years of undernourishment and the numerous worries of present-day life in Russia.

A ten dollar "A. R. A." parcel is a great help. The work of the American Relief Administration with Hoover at the head is one of the most brilliant pages in the history of the United States.

It seems to me that there is no need to describe in great detail the extent of misery among the scientists.

Do make every possible effort to sustain at least ten of these precious lives—precious in the broad sense of serving all mankind, the work of science being truly international and universal.

I wish you success in your good work!

M. GORKI.

SUPPLIES FOR THE CANCER CAMPAIGN.

The proceeds of the Lasker Memorial Fund, established by the family of Mrs. M. Lasker, in memory of her son, Harry M. Lasker, are this year being applied to an activity which the Society has hoped for two years to be able to accomplish. We refer to the reproduction of the colored cancer exhibit which has now been lithographed in six colors on cardboard 14 in. x 22 in. A copy of this striking and instructive exhibit will be available for each of the Society's committees (some 700 in number) and will be sent direct by the Acme Lithograph Company, New York.

The Society is ordering 1,000,000 copies of the little circular "Vital Facts About Cancer," which will also be sent about that time. *Will State and Provincial Chairmen kindly make known their wishes with regard to this shipment. If they prefer that the material not be shipped to them for transmittal to their district, county and local committees, information as to whom they should be sent, and the proportion which each should receive, will be greatly appreciated.*

The letter written by Dr. Frank Billings of Chicago for special reading in churches will be printed in an edition of 500,000. May we ask once again that the State and Provincial Chairmen notify their various committees concerning this in order that arrangements may now be made with the clergy throughout the land for the reading of this short, earnest and authoritative letter? Remember that it is also suitable for reading before lodges, clubs, and all manner of assemblages where time will not permit of a longer address.

The Metropolitan Life Insurance Company has submitted and secured the Society's endorsement of another excellent cancer circular entitled "A Message of Hope." Besides supplying this to all its managers and agents for distribution to policyholders, the Company has liberally allotted 500,000 to be sent to our Cancer Committees.

HEALTH ESSAY CONTEST.

THE Board of Health of Brookline has offered the following prizes to the school children of that town for the best essays on subjects relating to health: A first prize of ten dollars, a second prize of seven dollars, to children of all grades; a third prize of five dollars to children in the grammar school grades only, and a fourth prize of three dollars for children in the six lower grammar school grades.

THE SALARY OF A HEALTH OFFICER.

THE Medical Officer of Health of the city of Manchester, England, resigned a few months since. The city fathers, in a fit of economy, put forth an advertisement for a new officer, to be paid a salary of seven thousand dollars. On the ground that this salary was not only inadequate for the responsibility attendant on the duties of the office, but also insufficient when compared with the salaries of other city officials (the town clerk receiving eleven thousand dollars), the *British Medical Journal* and *Lancet* refused to publish the advertisement. This was, of course, not only a protest of the journals but of the physicians whom they represent. As a result, the City Council took the hint, and appointed a committee to confer in the matter with a committee representing the British Medical

Association. The outcome of this conference was a compromise, the health officer to receive for the first two years seventy-five hundred dollars, for the succeeding two years, eighty-seven hundred and fifty dollars, and thereafter ten thousand dollars.

Had an inadequate salary been offered a health official in any city of the United States, we fear the profession would have found the matter of little concern. This is partly because politics, rather than preparation, enters into such appointments, but also due to the fact pointed out by an anonymous writer in the *Century*, who uses a caustic pen, but seems to know what he is writing about, that the average physician is antagonistic to, rather than favorably interested in, the local departments of health and their doings. [Excerpt from an editorial in the *New York Medical Journal and Medical Record*.

Obituary.

ROBERT WORTHINGTON HASTINGS, M.D.

Dr. Robert W. Hastings died October 13, 1922, at his home in Brookline, at the age of fifty-six, after a short illness. For many years he had suffered with a cardiac affection.

A native of Warren, Mass., he was born August 4, 1866. Amherst gave him her A.B. and A.M. in 1888, and, entering Harvard Medical School, he graduated in 1893, then, after serving as medical house officer at Boston City Hospital and at the Boston Insane Hospital, he settled in practice in Brookline. He was instructor in Theory and Practice of Medicine and assistant in Pediatrics at Tufts College Medical School, where he was thrown into contact with the late E. W. Cushing, editor of the *Annals of Gynecology and Pediatry*. Dr. Hastings acted as associate editor of this periodical, and on Dr. Cushing's retirement, in 1896, was editor until 1902.

Dr. Hastings served as resident physician and visiting physician to the Boston Floating Hospital, medical inspector of the Brookline Board of Health and Councilor from the Norfolk District of the Massachusetts Medical Society from 1903 to 1912.

He wrote many articles for the medical press besides his editorial duties. Among them may be mentioned "Noise as a Factor in the Causation of Disease," 1898; "Fresh Air in the Treatment of Children's Diseases," 1903; "The Boston Floating Hospital," 1903; "Clinical Study of the Bacillus Dysenteriae in Boston and Vicinity," 1904.

Dr. Hastings married, June 8, 1904, Miss Edith A. Earhart of Hagerstown, Md., who survives him, as do two daughters.

RECENT DEATHS.

PROFESSOR JAMES P. PAIGE, in charge of the Department Veterinary School of the Massachusetts Agricultural College, died Oct. 5th, 1922. He had been professor of veterinary medicine since 1891. He was a man of scholarly habits and scientific attainments, in addition to strong capacity for leadership. His legislative experience gave him influence so that he was able to secure an appropriation to build the veterinary laboratory. He was born in Prescott in 1862, graduated from the Massachusetts Agricultural College in 1882 and McGill University in 1888. He studied also in Munich. He leaves a widow, a daughter and two brothers.

FRANK WILLIAM ANDERSON, a fellow of the Massachusetts Medical Society, died at the home of his parents in Roslindale, September 29, 1922, at the age of 37. He had been associate in the section on radium and roentgen-ray therapy at the Mayo Clinic, Rochester, Minn., since October, 1920.

Correspondence.

THE WARREN TRIENNIAL PRIZE.

Mr. Editor:

At a meeting of the Trustees of the Massachusetts General Hospital, held October 13th, 1922, the following vote was passed:

Voted: That two prizes instead of one be awarded this year, the first prize to be $500 and the second prize to be $250; the award of the second prize this year, however, shall not be taken as establishing a precedent.

There were twenty-one essays submitted, the contestants being from the following countries: Poland, Germany, Italy, Hungary, England, United States.

The first prize went to the essay, "The Circulation in the Mammalian Bone-Marrow," written by Cecil K. Drinker, M.D., Katherine M. Drinker, M.D., and Charles C. Lund, M.D., all of Boston.

A second prize was awarded to the essay, "The Effect of X-rays on the Nuclear Division," written by James Mott Mavor, M.D., Union College, Schenectady, New York.

The reason for awarding a second prize this year was because of the difficulty in determining the relative merits of the first two papers.

Yours very truly,
F. A. WASHBURN, Director.

CORRECTION.

439 Washington St., Brighton, Mass.

Mr. Editor:

In the October 5th number, page 513, you refer to Kala *Agar*. Is not Kala *Azar* meant?

A. STANTON HUDSON.

[The JOURNAL is appreciative of the correction.—Editor.]

A DISCLAIMER.

17th October, 1922.

Mr. Editor:

In the *Advertiser* of Sunday, October 15, in an article by Elizabeth Rintels advertising the pretensions of Dr. Albert Abrams, I am quite falsely accused of having approved of Dr. Abrams' theories and methods. As I consider him one of the most gigantic frauds of the century, and as a number of persons have asked me whether I believed in Dr. Abrams, I wish to take this opportunity to state as emphatically as I can that neither he nor any other

person has had any authorization to use my name in this way, and that I feel the same disgust and indignation against his fraudulent methods that any other reputable physician must.

RICHARD C. CABOT, M.D.

MASSACHUSETTS MEDICAL BENEVOLENT SOCIETY

The annual meeting will be held at the Boston Medical Library at 5.30 P. M., on Thursday, October 26, 1922. The Council will meet at the same place at 5.15 P. M. R. M. GREEN, *Secretary.*

BOOKS RECEIVED FOR REVIEW.

THE JOURNAL acknowledges the receipt of the following books for review:

Oto-Rhino-Laryngology for the Student and Practitioner. Second English edition. By Georges Laurens. Authorized English translation of the fourth revised French edition by H. Clayton Fox. Published by William Wood & Co., New York. 350 pages. Price $4.50.

A Text-Book on Gonorrhea and Its Complications. By Dr. Georges Luys. Translated and edited by Arthur Foerster. Published by William Wood & Co., New York. Price $6.50.

A Synopsis of Surgery. By Ernest W. Hey Groves. Published by William Wood & Co., New York. 621 pages. Price $4.50.

Stedman's Medical Dictionary. Seventh edition. By Thomas Lathrop Stedman. Published by William Wood & Co., New York. 1144 pages, 15 plates. Price $7.

Functional Nervous Disorders: Their Classification and Treatment.—By Donald E. Core. Published by William Wood & Co., New York. 371 Pages. Price $6.

The Heart as a Power Chamber. A Contribution to Cardio-Dynamics.—By Harrington Sainsbury. Oxford Medical Publications. 248 Pages. Price $3.75.

Ashby & Wright's Diseases of Children—Medical and Surgical. 6th Edition. Revised by H. T. Ashby and C. Roberts. Oxford Medical Publications. 769 Pages. Price $12.50.

Clinical and Operative Gynaecology.—By J. M. Munro Kerr. Oxford Medical Publications. 832 Pages. Price $15.

Studies from the Rockefeller Institute for Medical Research. Reprints—Volume XLII. Privately published. 616 Pages. Price $2.

Kirke's Handbook of Physiology. Tenth American Revision.—By Charles Wilson Greene. Published by William Wood & Co., New York. 820 Pages. Price $5.

A System of Clinical Medicine—Dealing with the Diagnosis, Prognosis and Treatment of Diseases, for Students and Practitioners.—By Thomas Dixon Savill. Published by William Wood & Co., New York. 951 Pages. Price $9.

Medical Record Visiting List for Physicians. Published by William Wood & Co., New York. Prices $1.75, $2 and $2.50.

The Elements of Scientific Psychology.—By Knight Dunlap. Published by C. V. Mosby Co., St. Louis. 368 Pages. Price $3.50.

Physical Diagnosis.—By W. D. Rose. 3d Edition. Published by C. V. Mosby Co., St. Louis. 755 Pages. Price $8.50.

Physiology and Biochemistry in Modern Medicine.—By J. J. R. MacLeod. 4th Edition. Published by C. V. Mosby Co., St. Louis. 992 Pages. Price $11.

UNITED STATES CIVIL-SERVICE EXAMINATION.

X-RAY MECHANICIAN.

Receipt of Applications to Close November 14, 1922.

The United States Civil Service Commission announces an open competitive examination for x-ray mechanician. A vacancy in the Veterans Bureau, Washington, D. C., at $200 a month, and vacancies in positions requiring similar qualifications, at this or higher or lower salaries, will be filled from this examination, unless it is found in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

Applications.—Applicants should at once apply for Form 1800, and form for county officer's certificate, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C.

ELECTIONS AND APPOINTMENTS AT HARVARD UNIVERSITY.

The following elections and appointments of the President and Fellows of Harvard University have been consented to by the Board of Overseers:

Robert Bayley Osgood, Professor of Orthopedic Surgery, to serve from September 1, 1922. Leroy Matthew Simpson Miner, Professor of Clinical Oral Surgery, to serve from September 1, 1922. Fred Alexander Beckford, Professor of Prosthetic Dentistry, to serve from September 1, 1922. Lawrence Wills Baker, Professor of Orthodontia, to serve from September 1, 1922.

The following were appointed for three years from September 1, 1922:

Frank Turner Taylor, Assistant Professor of Clinical Dentistry. Amos Irving Hadley, Assistant Professor of Ceramics. John William O'Connell, Assistant Professor of Materia Medica and Therapeutics. Horace Leonard Howe, Assistant Professor of Clinical Orthodontia. Norman Beverly Nesbett, Assistant Professor of Prosthetic Dentistry.

NOTE.

An unsigned criticism of an advertisement in the JOURNAL has been received. We are always appreciative of constructive criticism, but the general policy of editorial offices is to ignore unsigned communications. A written opinion only carries weight when the author is known.

THE NORFOLK DISTRICT MEDICAL SOCIETY.

A stated meeting of the Society will be held Tuesday, October 31, at the Massachusetts Hospital School, Randolph Street, Canton, at 3:30 P. M. sharp. The Hospital School is about six miles from Mattapan Square via Blue Hill Parkway, Canton Ave., past the Blue Hill Station through Ponkapoag, bearing right at end of road, taking road marked Canton and Sharon, about one and one-half miles beyond, sharp left on Randolph Street. The buildings can be seen from this corner. Fellows not having an automobile will please be at Mattapan Square not later than 3 P. M. so that transportation may be furnished. Arrive at 3:30 P. M. Inspect buildings and school. Out-of-doors activities of the pupil patients of the school. Demonstration of the work and training. Inspection of the new one-hundred bed infirmary, probably the best equipped building of its kind in this country. Presentation of cases by the staff, with special reference to modern treatment of tuberculosis of the hip. Moving pictures and stereopticon. Business meeting 6 P. M.

A full attendance is urgently requested, as the work done by this institution is very remarkable. It may be well to mention that here can be found the greatest number of orthopedic cases in America.

The Censors meet for the examination of candidates, Thursday, Nov. 2, 1922.

Collation.

DISEASES REPORTED TO MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH.

Week Ending September 30, 1922.

Disease.	*No. of Cases.*	*Disease.*	*No. of Cases.*
Anterior poliomyelitis	17	Scarlet fever	97
Chicken-pox	8	Septic sore throat	1
Diphtheria	189	Syphilis	44
Dog-bite requiring anti-rabic treatment	4	Suppurative conjunctivitis	9
Encephalitis lethargica	2	Tetanus	1
German measles	3	Trachoma	2
Gonorrhea	124	Tuberculosis, pulmonary	101
Influenza	4	Tuberculosis, other forms	18
Malaria	4	Typhoid	32
Measles	101	Whooping cough	182
Mumps	12	Leprosy	1
Ophthalmia neonatorum	18		
Lobar pneumonia	24		

Week Ending October 7, 1922.

Disease.	*Cases.*	*Disease.*	*Cases.*
Anterior poliomyelitis	12	Pellagra	1
Chicken-pox	23	Pneumonia, lobar	40
Diphtheria	227	Scarlet fever	132
Dog-bite requiring anti-rabic treatment	3	Septic sore throat	7
Encephalitis lethargica	2	Syphilis	30
Epidemic cerebrospinal meningitis	1	Suppurative conjunctivitis	6
German measles	2	Tetanus	1
Gonorrhea	121	Trachoma	3
Influenza	3	Trichinosis	1
Malaria	2	Tuberculosis, pulmonary	125
Measles	119	Tuberculosis, other forms	14
Mumps	15	Typhoid	30
Ophthalmia neonatorum	21	Whooping cough	118
		Hookworm	1

Week Ending October 14, 1922.

Disease.	*Cases.*	*Disease.*	*Cases.*
Anterior poliomyelitis	5	Mumps	70
Chicken-pox	29	Ophthalmia neonatorum	5
Diphtheria	225	Pneumonia, lobar	59
Dog-bite requiring anti-rabic treatment	2	Scarlet fever	131
Dysentery	1	Septic sore throat	1
Encephalitis lethargica	2	Syphilis	40
Epidemic cerebrospinal meningitis	3	Suppurative conjunctivitis	10
German measles	5	Tetanus	1
Gonorrhea	96	Trachoma	2
Influenza	2	Tuberculosis, pulmonary	108
Malaria	1	Tuberculosis, other forms	20
Measles	158	Typhoid	18
		Whooping cough	143

MEDICAL SOCIETY OF THE MISSOURI VALLEY.

The thirty-fifth annual meeting of the Association was held at St. Joseph, Mo., September 21-22, 1922, under the presidency of Dr. Paul E. Gardner, of New Hampton, Iowa. The guests of this Society included Dr. Frank Smithies, of Chicago, who gave an illuminating lecture on "The Modern Meaning of Biliousness"; Dr. John B. Wood, of Kansas City, gave a most excellent paper on the "Vitamines" (illustrated by lantern slides); Dr. E. P. Sloan, of Bloomington, Ill., presented a movie picture demonstration of his operation for "Goiter" under local anesthesia; Dr. Norman M. Keith, of Mayo Clinic, read a very instructive paper on "Hypertension in Cardio-Vascular Disease." The session closed with a symposium on the "Early Diagnosis of Cancer."

Officers elected for the ensuing year were as follows: President, Dr. Floyd H. Spencer, St. Joseph, Mo.; First Vice-President, Dr. W. S. Stotler, Shenandoah, Iowa; Second Vice-President, Dr. Palmer Findley, Omaha, Neb.; Treasurer, Dr. O. C. Gebhart, St. Joseph, Mo. (re-elected); Secretary, Dr. Charles Wood Fassett, Kansas City, Mo. (re-elected). Next meeting, Omaha, September, 1923.

SOCIETY MEETINGS.

DISTRICT SOCIETIES.

A list of society meetings is herewith published. This list will be changed on information furnished by the secretaries of the societies, and will appear in each issue.

Barnstable District:—Hyannis,—November 3, 1922, February 2, 1923, (Annual Meeting)—May 4, 1923.

Bristol South District:—Fall River,—November 2, 1922, May 3, 1923.

Essex North District:—Haverhill, (Semi-Annual Meeting)—Jan. 3, 1923. Y. M. C. A. Building, Lawrence, (Annual Meeting)—May 2, 1923.

Suffolk District:—Combined meeting of Boston Medical Library and Suffolk District, November 22, 1922; December 27, 1922; January 31, 1923; February 28, 1923; March 28, 1923; Annual Meeting, April 25, 1923.

The Springfield Academy of Medicine meets the second Tuesday of each month. Schedule of speakers includes the following names: Dr. Alexis Carrel, Dr. W. B. Long, Dr. J. W Williams, Dr. W. S. Thayer, and Dr. Barton Cooke, Hist. The date for each speaker has not been assigned.

Middlesex North District:—Meetings; Wednesday, January 31, 1923.

Worcester District meetings in Worcester, Nov. 8, Dec. 13, 1922, Jan. 10, Feb. 14, March 14, April 11 and May 9, 1923, the last named date being the annual meeting.

A joint meeting of the Worcester and Worcester North Districts will be held at the Burbank Hospital, Fitchburg, Oct. 31, 1922.

A joint meeting of the Plymouth, Bristol North, Bristol South and Barnstable Districts will be held at Lakeville Sanatorium, Middleboro, on November 9, 1922.

STATE, INTERSTATE AND NATIONAL SOCIETIES.

Massachusetts Association of Boards of Health, October 26, 1922, Worcester, Mass., W. H. Allen, Mansfield, Mass., Secretary.

New York and New England Association Railway Surgeons, 32nd Annual Meeting at New York City, October 28, 1922, Donald Guthrie, Sayre, Pa., Secretary.

November, 1922. Massachusetts Society of Examining Physicians, (Date and place of meeting undecided), Hilbert F. Day, Secretary. National Cancer Week, November 12 to 18.

December, 1922. New England Dermatological Society Meeting, Wednesday, December 13, 1922, at 3.30 P. M., in the Surgical Amphitheatre, Boston City Hospital, C. Guy Lane, Secretary.

January, 1923. Massachusetts Society of Examining Physicians, (Date and place undecided), Hilbert F. Day, Secretary. Massachusetts Association of Boards of Health, January 25, Annual Meeting, Boston, W. H. Allen, Mansfield, Mass., Secretary.

February, 1923. New England Dermatological Society Meeting, February 14, 1923, at 3.30 P. M., in the Skin Out-Patient Department, Massachusetts General Hospital, C. Guy Lane, Secretary.

March, 1923. Massachusetts Society of Examining Physicians, (Date and place undecided), Hilbert F. Day, Secretary.

April, 1923. New England Dermatological Society Meeting, April 11, 1923, at 3.30 P. M., in the Surgical Amphitheatre, Boston City Hospital, C. Guy Lane, Secretary. Massachusetts Association of Boards of Health, April 26, 1923, Boston, W. H. Allen, Mansfield, Mass., Secretary.

May, 1923. Massachusetts Society of Examining Physicians, (Date and place undecided). American Pediatric Society Meeting, May 31, June 1 and 2, 1923, at French Lick Springs Hotel, French Lick, Ind., H. C. Carpenter, Secretary.

June, 1923. American Medical Association, San Francisco, June 25-29, 1923, Alexander R. Craig,* Chicago, Ill., Secretary.

July, 1923. Massachusetts Association of Boards of Health, July 26, Nantasket, W. H. Allen, Mansfield, Mass., Secretary.

*Deceased Sept. 2, 1922.